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COUNTY COUNCIL.

PREVENTION AND TREATMENT OF TUBERCULOSIS IN THE ADMINISTRATIVE COUNTY OF LANCASTER.

Report of the Central Tuberculosis Officer of the Lancashire County Council for the Year 1925.

C. Tinling & Co., Ltd., Liverpool, London and Prescot.
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COUNTY TUBERCULOSIS COMMITTEE (1926).

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†Sir Henry F. Hibbert, Bart., J.P., D.L.

The Vice-Chairman of the County Council :

†H. Wade Deacon, Esq., C.B.E., J.P.

Chairman of Committee :

[*P. J. Hibbert, Esq., J.P., D.L. (Deceased 29th September, 1926).]

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* Members of Sanatorium and Hospital Sub-Committee.

† County Aldermen.

MEDICAL AND NURSING STAFF OF THE TUBERCULOSIS DEPARTMENT, 1926.

Central Tuberculosis Officer :

G. Lissant Cox, M.A., M.D. (Camb.), M.R.C.S. (Eng.), L.R.C.P. (Lond.).

Consultant Tuberculosis Officers :

George Jessel, M.A., M.D. (Oxon.), D.P.H. (Manchester). (†24th July, 1913).

Charles W. Laird, B.A., M.D. (Dublin), D.P.H. (Liverpool). (†24th July, 1913).

Burgess MacPhee, M.B., Ch.B. (Glas.), D.P.H. (Camb.). (†24th July, 1913).

J. Logan Stewart, M.A., M.B., Ch.B. (Glas.), D.P.H. (Camb.). (†24th July, 1913).

Alan D. Brunwin, M.A., M.D. (Camb.), D.P.H. (Aberdeen). (†23rd October, 1913).

Assistant Tuberculosis Officers :

George H. Leigh, M.D., Ch.B., D.P.H. (Manch.). (†15th April, 1914).

Charles H. Lilley, M.B., Ch.B. (St. Andrew's), D.P.H. (Lond.). (†15th April, 1914).

George Fletcher, M.A., M.D., Ch.B. (Glas.), D.P.H. (Camb.). (†15th April, 1914).

Scott C. Adam, M.B., Ch.B. (Glas.), D.P.H. (Lond.). (†21st May, 1919).

G. Barker Charnock, L.R.C.S., L.R.C.P. (Edin.), L.R.F.P.S. (Glas.), D.P.H. (Liverpool). (†21st May, 1919).

Alexander B. Jamieson, M.B., Ch.B. (Edin.). (†22nd October, 1919).

Cecil Berry, L.R.C.P., L.R.C.S. (Edin.), L.F.P.S. (Glas.), D.P.H. (R.C.S.I.). (†16th June, 1920).

John Cathcart, M.B., Ch.B. (Edin.), D.P.H. (R.C.P.S.I.). (†16th June, 1920).

Medical Superintendent, High Carley Sanatorium and Oubas House Children's Sanatorium, and Consultant Tuberculosis Officer for Furness Sub-Area :

‡E. H. Allon Park, M.D. (Lond.), L.R.C.P. (Lond.), M.R.C.S. (Eng.). (†24th July, 1913).

Assistant Medical Superintendent, High Carley Sanatorium :

Henry J. Villiers, L.R.C.P.I. and L.R.C.S.I. (†17th December, 1919).

† Date of Appointment.

‡ Appointed Medical Superintendent, 1916.

Medical Superintendent, Elswick Sanatorium, and Consultant Tuberculosis Officer for Fylde Sub-Area:

‡George Leggat, M.B., Ch.B., D.P.H. (Aberdeen). (†15th April, 1914).

Visiting Medical Superintendent, Peel Hall Pulmonary Hospital:

George Jessel, M.A., M.D. (Oxon.), D.P.H. (Manchester).

Visiting Medical Superintendent, Chadderton Pulmonary Hospital:

James Wood, M.D., M.B., Ch.B., D.P.H., R.C.P.S.I. (†22nd October, 1919).

Visiting Medical Superintendent, Rufford Pulmonary Hospital:

Charles W. Laird, B.A., M.D. (Dublin), D.P.H. (Liverpool).

Visiting Physician, Luneside Pulmonary Hospital, Lancaster.

Alan D. Brunwin, M.A., M.D. (Camb.), D.P.H. (Aberdeen).

Tuberculosis Health Visitors:

		Commenced duties	
Nurse	M. A. Potter		1st June, 1914.
,,	R. Lambert*	,,	12th June, 1914.
,,	E. Walch	,,	15th June, 1914.
,,	H. Dewsnap*	,,	7th December, 1914.
,,	A. Munro*	,,	5th July, 1915.
,,	M. Duggan*	,,	30th August, 1915.
,,	R. Davison	,,	6th September, 1915.
,,	L. Walker*	,,	6th September, 1915.
,,	J. Skelcher	,,	26th April, 1916.
,,	A. Tweedy*	,,	17th January, 1917.
,,	I. Laing*	,,	20th May, 1918.
,,	E. Walters*	,,	1st October, 1918.
,,	I. F. Macdonald*	,,	2nd October, 1918.
,,	F. D. Abbott*	,,	1st July, 1919.
,,	C. Guilfoy*	,,	1st July, 1919.
,,	M. J. Wilson*	,,	1st July, 1919.
,,	A. Flynn*	,,	1st December, 1919.
,,	M. B. Jones	,,	1st December, 1919.
,,	L. F. Norwood	,,	5th January, 1920.
,,	E. Watterson	,,	19th July, 1920.
,,	E. A. Duston	,,	1st February, 1921.
,,	F. Milnes*	,,	1st March, 1921.
,,	H. M. Shakespeare*	,,	1st March, 1921.
,,	F. G. Smith	,,	1st November, 1921.
,,	M. A. M. Thornton	,,	16th April, 1923.
,,	A. Dickinson	,,	5th September, 1923.
,,	A. Duncan	,,	1st April, 1924.
,,	T. Fielding*	,,	1st December, 1924.
,,	H. M. Alcock*	,,	20th February, 1925.
,,	D. Grime*	,,	6th September, 1926.

* Possesses a health visitor's or sanitary certificate.
† Date of Appointment.
‡ Appointed Medical Superintendent, 1919.

Rufford Pulmonary Hospital near Ormskirk.

Photo by "Preston Guardian."

Patients viewing lily pond. Photograph taken at the opening of the hospital by Sir Henry F. Hibbert, Chairman of the Lancashire County Council, on the 5th August, 1926. (*See pages 69 and 70*).

REPORT
OF THE
CENTRAL TUBERCULOSIS OFFICER
FOR THE YEAR 1925.

To the Chairman and Members of the
Lancashire County Council.

Ladies and Gentlemen,

I have the honour to submit the eleventh annual report on the work of the tubereulosis department, and a summary of the principal features appears on the following pages (ix to xii).

On behalf of the medieal, nursing and clerieal staff, I wish to reeord how very mueh the whole staff deplores the reeent death of the Chairman of the County Tubereulosis Committee who was so intimately assoeiated with the County tuberculosis seheme from its inauguration shortly after the passing of the National Insuranee Aet in 1911.

The reduction in tuberculosis cases and deaths.

For the *third successive year*, the number of deaths and the death-rate from pulmonary tubereulosis (eonsumption) were *the lowest so far recorded in the Administrative County.* On the other hand, the death-rate per 1,000 of the population from non-pulmonary tubereulosis (disease of the bones, joints, glands and brain) although fraetionally higher than last year, was, with that one exeeption, also the lowest on reeord.

It is also eneouraging to report that the number of new persons notified as suffering from pulmonary and non-pulmonary tuberculosis was less than in 1924. The reduetion was 126 pulmonary (eonsumption) and 93 non-pulmonary.

The steady deeline experienced in the County is all the more satisfaetory beeause of the extensive unemployment. Finally, there is every indieation that the tubereulosis death-rate for the present year will show yet another lowest figure on record (see page 1).

The population dealt with under the County seheme was estimated at the end of 1925 to be 1,785,500 (males, 848,086 ; females, 937,414). The Administrative County eonsists of 121 munieipal boroughs, urban and rural distriets, but does not, of eourse, include the 17 eounty boroughs.

Notification of cases.

This eontinues to be satisfaetory. Non-notifieation in the Administrative County is some three times less in amount than the average for England and Wales. This is due to the high professional status of the tubereulosis medical staff, and the cordial eo-operation

between them and the family doctors and local medical officers of health. The efficiency of notification varies directly with the efficiency of the county council or county borough scheme dealing with tuberculosis. If there is really no comprehensive scheme, if there are poor and newly-qualified or part-time and badly-paid tuberculosis officers ; if there are insufficient means for expert diagnosis and too few beds for treatment, then a high proportion of non-notified fatal cases will be the rule and not the exception.

Propaganda and public education.

Again I have to draw attention to the need for education of the public in the symptoms and common dangers of tuberculosis, and to offer the suggestion that one way to attain this is by the instruction of the older children at school in elementary hygiene and the laws of health. The tuberculosis officers have continued to engage in propaganda work, giving lectures and addresses and assisting local authorities at health weeks by the loan of the tuberculosis department's own films, photographs and exhibits (including articles made by patients at County sanatoria and hospitals).

X-ray work.

All the consultant tuberculosis officers have now at their disposal one X-ray apparatus, and much evidence has accumulated to prove the value of X-ray examinations in the diagnosis of tuberculosis. I have again introduced a chapter (see pages 11 to 15) on X-ray work, and have inserted a number of photographs taken by the senior members of the medical staff, illustrating the various phases of the work. The number of X-ray examinations made by the tuberculosis medical staff during 1925 exceeded 4,000.

New methods of treatment.

Following the policy encouraged by the County Council, the tuberculosis medical staff have continued to engage in research work and in trials of new methods of treatment which are advocated as cures for tuberculosis (see pages 16 to 17). These trials are contingent on patients volunteering to undergo these new treatments. I am unable to report that any method, so far tried, has had any outstanding effect on the treatment of tuberculosis.

It must not be overlooked that, by the " ordinary " methods of treatment of tuberculosis 1,662 patients, up to the end of 1925, have been written off the register as " cured."

Artificial light treatment.

During 1925, experimental artificial light centres were established at the Ashton-under-Lyne and Lancaster Chief Dispensaries, and early in 1926 a mercury vapour lamp was introduced into the Elswick Sanatorium and the Rufford Pulmonary Hospital for the treatment of non-pulmonary

cases. Two of the consultant tuberculosis officers (Dr. Stewart at Ashton-under-Lyne and Dr. Brunwin at Lancaster) have been granted facilities to study the technique of light treatment, and other valuable experience is being gained which will be extremely advantageous in considering any extension of this form of treatment. The preliminary results are very satisfactory and encouraging. The subject is dealt with further on pages 18 to 20.

The establishment of the light centre at Ashton-under-Lyne has been assisted by the kind and very useful gift of two lamps by the Ashton-under-Lyne and District Care Committee out of their voluntary funds.

Housing conditions.

A census of the housing conditions of patients taken at the end of the year by the dispensary staff showed that the proportion of infectious or contagious pulmonary cases sharing a bed with one or more persons was 8·3 per cent., as against 8·8 per cent. last year, 10·1 per cent. in 1923, 13·1 per cent. in 1922, and 17·1 per cent. in 1921. The considerable improvement since 1921 is due mainly to the loan of bedsteads and mattresses, from the stock purchased by the County Council, to patients unable to provide these articles for themselves.

Care work.

There are now eighteen voluntary care committees at work in the County, covering a population of nearly 800,000. The Council's scheme to allow the care work for the remainder of the County to be done through the dispensary staff, pending the formation of voluntary committees, has proved most valuable in assisting necessitous patients.

Co-operation with sanitary authorities, medical practitioners, and health officials.

The results of the tuberculosis scheme would be very different if the relations with the medical practitioners in the County, together with the 121 sanitary authorities and their medical officers and sanitary inspectors, had not been of the most cordial and satisfactory character; I take this opportunity of acknowledging such co-operation from these sources. The practitioners continue to send over three-quarters of their patients to the dispensary for examination before the statutory notification.

New County hospitals and dispensaries.

The Rufford Pulmonary Hospital, accommodating 50 patients was opened by Sir Henry F. Hibbert, the Chairman of the County Council on the 5th August, 1926. The hospital takes mainly advanced cases of pulmonary tuberculosis, but a few combined pulmonary and non-pulmonary cases are also treated to relieve the present lack of suitable accommodation for such cases, and for this purpose an X-ray apparatus, a plaster-room and an operating theatre have been provided.

At Withnell, the work of adapting the Hall, and building pavilions for 46 beds, to serve as a pulmonary hospital for the East Lancashire

County districts (in place of the Bull Hill Pulmonary Hospital, Darwen) is proceeding and the accommodation will be ready early in 1927.

At Stretford, the lease of the old dispensary terminated, and new and better premises have been obtained in the locality.

Donations and gifts.

The Committee have acknowledged with thanks several donations and gifts to the County hospitals and sanatoria. Prizes for whist-drives, bowling tournaments and other competitive events will be gratefully received by medical superintendents, or will be distributed by myself.

Cost of tuberculosis scheme.

The cost of the County scheme dealing with tuberculosis, allowing for government grants, has required a County rate of 1·64 pence (roughly 1½d.) in the £ for the current year 1926–1927.

Changes in tuberculosis records and statistics.

In September, 1925, the Ministry of Health issued a memorandum (No. 37/T.) which had the main object of establishing certain standardised essential records to be kept by tuberculosis officers, upon which annual returns would be required to be furnished to the Ministry of Health. One of the most important compulsory changes is the adoption of a new classification of tuberculosis cases, which, for pulmonary cases, takes the place of the Turban-Gerhardt system which has been in use generally in the country. The adoption of the new classification has, however, made it desirable, in order to preserve the continuity of records, to effect a complete reclassification of the whole of our 26,500 records of patients, who, from 1912 up to the end of 1925, had applied to the County Council for treatment. This work is now proceeding and next year's statistics will be based on the new classification.

———

I have again to thank my medical colleagues, the nursing staff and clerical staff for continued help. New methods of diagnosis and treatment, and a higher state of efficiency always aimed at, increases the work year by year. I have had very valuable help from my principal clerk, Mr. H. F. Hughes, especially in preparing this report, and have in addition to thank the public health department for furnishing certain statistics on notifications and deaths.

I am,
Your obedient Servant,
G. LISSANT COX,
Central Tuberculosis Officer.

County Offices, Preston,
15th October, 1926.

TUBERCULOSIS INCIDENCE AND MORTALITY.

The following is a summary of the principal features as to tuberculosis incidence and mortality in the Administrative County during 1925 :—

1.—The number of deaths and the death-rate from pulmonary tuberculosis (consumption) in the County are *for the third consecutive year the lowest on record.* It may also be mentioned that the number of deaths from tuberculosis so far recorded in 1926, gives every indication that there will be a still further reduction in the total deaths for the current year.

2.—The number of new cases of pulmonary and non-pulmonary tuberculosis notified is less than in the previous year, the reduction being 126 pulmonary and 93 non-pulmonary.

3.—The reduction in the number of cases of pulmonary tuberculosis notified, and the lowest death-rate yet recorded is surprising when the amount of unemployment (extending now over four or five years) and the lack of houses are taken into consideration.

4.—Although unemployment and too few houses are serious adverse factors, it is clear they have not been able to outweigh other factors leading to a reduction in the number of cases and the death-rate, and amongst the favourable factors may be put the many methods of prevention carried out by the County tuberculosis dispensary organisation (see pages 8 to 10).

5.—Although the death-rate from pulmonary tuberculosis in the County has been without exception each year less than that for England and Wales, it is interesting to note the continuous fall from 1891 to 1902, and the nearly level rate from 1903 to 1914 (see chart page 3).

6.—Both pulmonary and non-pulmonary tuberculosis are much more prevalent among males than females. The death-rate is in the proportion of 100 to 76. (See Table 3, page 4). About half of the female industrial workers in the County are cotton weavers, and this occupation is, as I have shown previously, a healthy one as regards tuberculosis.

7.—The deaths from pulmonary tuberculosis at all ages represented 5·3 per cent. of the total deaths from all causes, as compared with 6·8 per cent. for the whole of England and Wales.

8.—In the County, pulmonary tuberculosis is the most prevalent and fatal between ages 15 to 25 years, and this is a fact not sufficiently realized. For the five years 1921 to 1925, pulmonary tuberculosis accounted for no less than 31 out of every 100 of the deaths from all causes between the ages mentioned.

The following table shows the cases notified and the deaths registered during 1925 and the preceding twelve years in the Administrative County area :—

TABLE 1.

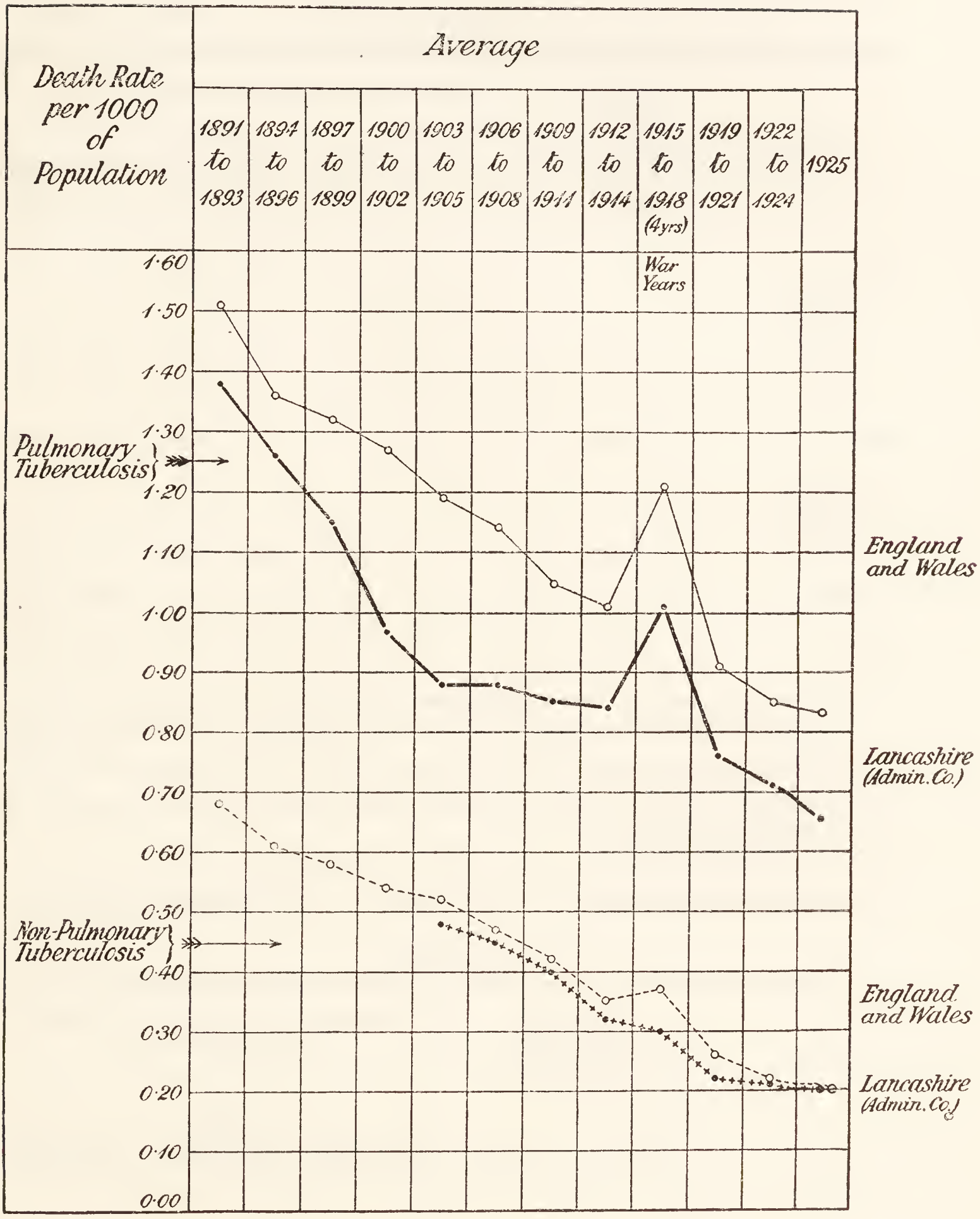
Year.	Cases Notified.			Deaths.			Death-rate per 1,000 of population.		
	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Total.	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Total.	Pulmonary Tuberculosis	Non-Pulmonary Tuberculosis	Tuberculosis (all forms)
1913	2,700	1,592	4,292	1,441	527	1,968	0·82	0·30	1·12
1914	2,820	1,140	3,960	1,523	572	2,095	0·87	0·32	1·19
1915	2,872	1,128	4,000	1,614	555	2,169	0·96	0·34	1·30
1916	2,689	1,180	3,869	1,685	471	2,156	1·04	0·29	1·33
1917	2,375	1,062	3,437	1,584	466	2,050	1·00	0·30	1·30
1918	2,534	885	3,419	1,652	435	2,087	1·07	0·28	1·35
1919	2,105	847	2,952	1,339	358	1,697	0·80	0·22	1·02
1920	2,084	968	3,052	1,323	396	1,719	0·76	0·23	0·99
1921	2,044	899	2,943	1,301	376	1,677	0·73	0·21	0·95
1922	1,863	956	2,819*	1,362	389	1,751	0·77	0·22	0·99
1923	1,937	1,188	3,125*	1,250	412	1,662	0·70	0·23	0·93
1924	1,972	1,120	3,092*	1,215	339	1,554	0·68	0·19	0·87
1925	**1,846**	**1,027**	**2,873***	**1,205**	**361**	**1,566**	**0·67**	**0·20**	**0·87**

* Corrected figure after deducting the following cases found to be non-tuberculous and notifications cancelled :—1922 : 14 pulmonary, 12 non-pulmonary ; 1923 : 33 pulmonary, 31 non-pulmonary ; 1924 : 57 pulmonary, 38 non-pulmonary ; and 1925 : 83 pulmonary, 49 non-pulmonary.

N.B.—The notifications in 1924 cover a period of 53 weeks, and in 1913, 48 weeks.

The chart opposite shows in a more graphic form the fall experienced in the death-rates from pulmonary and non-pulmonary tuberculosis in the County compared with that in England and Wales.

Tuberculosis Death-Rates, 1891-1925.



The main points to observe from the chart are:—(*a*) The County pulmonary death-rate invariably keeps below that for England and Wales; (*b*) the abnormal rise during the four war years which have been taken together purposely for striking an average.

Table 2 below shows in percentages the age distribution of the male and female deaths from pulmonary tuberculosis :—

TABLE 2.

Period.	Deaths at all ages from Pulmonary Tuber-culosis	Deaths in various Age Groups.—Years.							
		0 to 1	1 to 2	2 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and over
MALES—		%	%	%	%	%	%	%	%
Avcrage 3 years :—									
1919–21 ...	695	·6	·3	·8	2·7	15·2	42·2	34·4	3·8
1922–24 ...	700	·3	·5	·7	2·3	17·9	40·3	33·9	4·1
1925	660	...	·5	·8	2·3	17·7	40·3	34·8	3·6
FEMALES—									
Average 3 years :—									
1919–21 ...	626	·3	·6	·8	5·7	26·0	45·2	18·2	3·1
1922–24 ...	575	·3	·3	·9	4·7	31·3	41·3	17·8	3·2
1925	545	·7	·7	·2	3·1	29·7	42·7	20·2	2·6

It will be observed from the above table that the deaths of females occur at an earlier age in life than the males ; it is from age 45 and upwards that the male deaths become much heavier than the females at the corresponding age.

The higher mortality of males over females, based on the sex distribution at the Census, is further shown in the following Table 3 :—

TABLE 3.

Year.	Estimated Population of Administrative County.		Death-rate per 1,000 of Population according to sex.					
	Males	Females	Pulmonary Tuberculosis		Non-Pulmonary Tuberculosis		Tuberculosis (all forms)	
			M.	F.	M.	F.	M.	F.
1922	838,837	927,190	0·89	*0·65*	0·24	*0·19*	1·14	*0·84*
1923	841,987	930,671	0·83	*0·58*	0·27	*0·19*	1·11	*0·78*
1924	846,804	935,996	0·76	*0·61*	0·21	*0·17*	0·97	*0·78*
1925	848,086	937,414	0·78	*0·58*	0·22	*0·18*	1·00	*0·76*

In Appendix I. on pages 90–91 of this report are given the death-rates from pulmonary and non-pulmonary tuberculosis in 121 urban and rural sanitary districts in the Administrative County, and on page 91 are given for 1925 the deaths and death-rates from tuberculosis in the several dispensary areas.

The notifications of tuberculosis in 1925 are dealt with further in Appendix II, where folding Tables B, C, and D, are inserted, analysing them as regards the parts of the body affected, age, and sex.

THE DIAGNOSIS AND PREVENTION OF TUBERCULOSIS AS FUNCTIONS OF A TUBERCULOSIS DISPENSARY.*

In this chapter I will try to deal with some of the difficult and fundamental aspects of the tuberculosis dispensary, and with some practical results that have emerged after twelve years' experience in Lancashire, and will discuss two functions of a dispensary which are the most important; they are diagnosis and prevention.

I.—Diagnosis.

This naturally must be taken first. Do we really want in our anti-tuberculosis schemes means for proper and expert diagnosis? Everyone will say, "Yes"; but unfortunately it is not usually understood how much is required to make the diagnosis of tuberculosis really effective. First and foremost is the man, the tuberculosis officer. Is he to be a real specialist, or only a sham one? Will he be held a real specialist by the general practitioners if he is a part-time officer doing other public health work outside tuberculosis work? We cannot have it both ways. It may be cheaper for the local authority to make the tuberculosis officer a man of all work, but the authority cannot then have a real specialist. A tuberculosis officer to take his proper place should know more than the average family doctor, and, with all modern aids to diagnosis at his disposal, must act in or over an area, or a local authority, of sufficient size to make all this possible. Here, unfortunately, we are faced with a fundamental difficulty, for the size of local administrative areas varies enormously. There are for example, the counties containing from 55,000 to 100,000 persons, contrasted with the Administrative County of Lancaster with 1,785,500 and the West Riding of Yorkshire with 1,500,000. Again, County Boroughs may contain 50,000 or even less, compared with Glasgow with 1,100,000 persons and Birmingham with nearly a million.

There is no factor which hinders or prevents really effective anti-tuberculosis schemes more than the number of *small* administrative areas, counties and boroughs, in England and Scotland. But no excuse can be made out for the larger authorities; they have everything necessary to allow the dispensary to work in a high state of efficiency.

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* This chapter formed the basis of an opening address by Dr. G. Lissant Cox at the annual conference of the National Association for the Prevention of Tuberculosis at Glasgow, in July, 1926.

The Administrative County of Lancaster, which has a population of 1,785,500, is divided into five large dispensary areas, with an average population of nearly 350,000, each in charge of a whole-time consultant tuberculosis officer, who has an office and small clerical staff at his chief dispensary. For administrative convenience there are also two sub-areas officered by the medical superintendents of the Elswick and High Carley Sanatoria. To assist the five consultants, there are eight assistant tuberculosis officers and thirty tuberculosis health visitors. The important feature is the large unit of population and the whole-time consultant at a salary of £800 to £1,000, with £150 per annum added as visiting medical superintendent of a pulmonary hospital in each dispensary area. The beds in these hospitals are of great value for clinical work, both for diagnosis and treatment.

With this as a basis, what do we get as results? *First*, nearly four-fifths (in 1925, actually 79 per cent.) of our new cases (exclusive of contacts) are referred to the dispensary by practitioners, school medical officers, pensions authorities, and other health officials for an opinion as to diagnosis or treatment *prior* to particulars of the notification being received by the tuberculosis staff. *Second*, each consultant tuberculosis officer is able to have a small laboratory at his chief dispensary for the area, with a trained laboratory worker attached. *Third*, each consultant tuberculosis officer has his own X-ray apparatus and takes his own skiagrams. The advantages of this are:—(1) the tuberculosis officer is able to make screen examinations and take skiagrams himself as often as is necessary; (2) the patients can be X-rayed at the same time as the clinical examination is made; (3) the tuberculosis officer, being in a position to follow the patients from beginning to end of their illness, is able to build up a knowledge of X-ray appearances, and to correct and modify his opinions in the light of the development of the cases. He becomes much more expert than a general radiologist in the interpretation of skiagrams of the chest.

The extent to which X-rays have been used may be considered in conjunction with the reduction in the proportion of cases remaining undiagnosed at the end of each year:—

	1922	1923	1924	1925
Number of X-ray examinations at County dispensaries	787	2,352	4,205	4,104
Proportion of doubtful pulmonary cases among new adult cases	4·7%	2·5%	2·3%	1·1%

Although I do not imply that X-ray examinations should take the place of other methods, they are, nevertheless, often invaluable and decisive in enabling a diagnosis to be made one way or the other, which would not otherwise have been possible.

Another important point is the financial saving when compared with what the cost would be if an outside radiologist were employed—in our own case the cost would have been five or six times as much. For instance, the cost per skiagram taken at the Ashton-under-Lyne dispensary worked out at 4s. 4¾d., and inclusive of tuberculosis officers' time and all overhead charges at 6s. 5d.

And, most important of all, some patients have not been sent to institutions who otherwise would have gone but for the better facilities for diagnosis by X-ray. As the cost of institutional treatment is high, a few of such patients save in maintenance a sum equal to the cost of the apparatus.

To sum up then as regards diagnosis. There is no excuse whatever for the large administrative areas not having proper means for the diagnosis of tuberculosis. Of primary importance is the man, the tuberculosis officer, who, to be a real specialist, must be a whole-time worker dealing with a large population. He must have at his disposal an X-ray plant, a laboratory, and beds in a hospital in his dispensary area. It is quite impossible for a tuberculosis officer to be a real clinical expert if he has a population under 150,000, and takes on all kinds of other work as well.

II.—Prevention.

Now, as regards prevention: a good deal is said about prevention, but there, as a rule, the matter ends. It is so much easier to run after the latest advertised cure for consumption, yet all must agree that the work of a dispensary unit should be focussed on prevention as the real and ultimate goal. In the past far too much emphasis has been laid on treatment rather than prevention. I can even remember being warned that if we did not make better provision for treatment of cases, that is, for handing out freely bottles of cod-liver oil, we might not earn the Government grant towards the cost of the scheme!

I will try to illustrate this function of prevention with a few concrete examples of the County work. First, as regards notification of cases under the Public Health (Tuberculosis) Regulations of 1912, the cordial relations existing between the dispensary staff and the doctors, supported by occasional friendly correspondence from the central office, has resulted in a very big decline in the number of omissions to notify. Naturally the efforts for prevention of infection will be much reduced if any large number of persons die from tuberculosis without the case being reported during life-time, and the persons

thereby not brought under public health control. We have reduced the total number of non-notified fatal cases from 303 in 1918 to 66 in 1925. The percentages are :—

	1918	1919	1920	1921	1922	1923	1924	1925
Proportion of non-notified fatal cases of pulmonary tuberculosis to total pulmonary deaths in the Administrative County of Lancaster...	18%	16%	13%	10%	8%	7%	5%	5%

Here, then, is one way in which the dispensary unit can aid in preventing the disease.

Having succeeded in reducing the unknown cases to small limits, it remains to show what more can be done to prevent the spread of infection. For those infective pulmonary cases remaining at home, the dispensary staff make every effort to secure that the patient occupies at least a separate bed. As many necessitous patients are unable to provide themselves with a separate bed, the County Council in 1920 purchased a stock of bedsteads and mattresses for loan to such patients, and by this means it has been possible to improve the sleeping arrangements, as shown below :—

	1921	1922	1923	1924	1925
Proportion of infectious pulmonary cases in the Administrative County of Lancaster without a separate bed...	17%	13%	10%	9%	8%
Number of bedsteads and mattresses on loan to patients	115	133	129	145	151

This illustrates, undoubtedly, further direct preventive work carried out by the dispensary unit. Each dispensary unit has, as already mentioned, a pulmonary hospital, to which, on the recommendation of the tuberculosis officer (who is the visiting medical superintendent) are sent patients requiring isolation on account of their bad home conditions. The isolation of these latter cases, where proper nursing is impossible at home, is one of the best known methods for the prevention

of tuberculosis. We have a varying number of beds at some 16 pulmonary hospitals situated in suitable centres, and the consultant tuberculosis officer of each dispensary area, for any hospital not under his own care, visits these monthly in order to confer with the medical superintendent on each of his cases, mainly as to the question of extension of patients' treatment or their return home, having particular regard to the home conditions which are known to the tuberculosis officer. All will agree that this work is preventive work.

Lastly, there is the work of the dispensary nurses, and coupled with it the word "education." In the campaign against tuberculosis, in the prevention of the disease, the work of a highly trained and efficient tuberculosis nurse is of the greatest value. In the County there are 121 urban and rural sanitary districts, and the cases of tuberculosis occurring are visited by a staff of 30 whole-time tuberculosis health visitors working from one of the tuberculosis dispensaries. The tuberculosis health visitor pays a primary visit to the notified cases in each sanitary area. Her reports on the environmental conditions are considered by the tuberculosis officer and a duplicate is sent at once to the local medical officer of health, whose attention is drawn to any sanitary defect or defects which may exist. By this mutual co-operation prompt and regular visits can be made and overlapping as regards visiting by officials of two public authorities is avoided. This phase of the tuberculosis work, particularly the co-operation with the local health officials, could not be done in my opinion so efficiently by health visitors devoting only a part of their time to tuberculosis work.

The two main functions of the tuberculosis dispensary—diagnosis and prevention—have now been briefly dealt with. Is tuberculosis declining as a result of all the work, and in spite of the very serious adverse factors of too few houses and so much unemployment? In the last six years, five of these have had a succession of the lowest pulmonary death-rates ever recorded. The figures are :—

	1918	1919	1920	1921	1922	1923	1924	1925
Death-rate per 100,000 of population from pulmonary tuberculosis in the Administrative County of Lancaster	107	80	76	73	77	70	68	67

Thus, since the last year of the war, the number of persons per 100,000 dying from consumption in the Administrative County has fallen from 107 in 1918 to 67 in 1925.

THE VALUE OF X-RAY EXAMINATIONS IN THE DIAGNOSIS AND TREATMENT OF TUBERCULOSIS.

The five large dispensary areas (average population nearly 350,000) into which the Administrative County is divided, and also the two sub-areas which are administered by the medical superintendents of the High Carley and Elswick sanatoria, have each an X-ray installation. In 1925 the number of X-ray examinations made at County dispensaries was 4,104, the number by private radiologists having fallen to 13.

There is no doubt that the X-ray installations have been of very great assistance to the tuberculosis officers (who are now skilled radiologists), as the rest of this chapter will demonstrate. Very important, too, is the financial saving. To have sent anything like the number of patients who were X-rayed in 1925 to Manchester or some other centre, under the old arrangement, would have cost about five or six times the present expenditure, no account being taken of much heavier railway fares and greater inconvenience to the patients. Still more important, some patients have not been sent to institutions who otherwise would have gone but for these better facilities for diagnosis, and as the cost of institutional treatment is high, a few of such patients save in maintenance a sum equal to the cost of the apparatus.

For the rest of this chapter, I am greatly indebted to Dr. J. Logan Stewart, consultant tuberculosis officer for dispensary area 3, who has devoted much time to the study and practice of X-ray work. Using a certain number of his own photographs and some taken by other senior members of the staff, he has written what follows on the value of X-ray examinations in the diagnosis and treatment of tuberculosis.

Five years' experience of the use of an X-ray apparatus at a tuberculosis dispensary has been a sufficiently long period in which to test the value of the method as an aid to diagnosis. This extended experience has left no doubt in the minds of myself and my colleagues in this area as to its value. I now regard it as an indispensable part of the equipment of the dispensary, where the chief function of the tuberculosis officer is to diagnose tuberculosis as early as possible, and to eliminate, with as high a degree of certainty as practicable, those cases which are not tuberculous.

The method is used to supplement the ordinary method of examining the chest by percussion, auscultation, etc. By this older method certain changes from the normal are elicited on the surface of the chest. These changes are indications of abnormal conditions existing within the thorax and affecting either the lungs or

the structures in the vicinity. This method is very successful up to a point, and is, of course, capable of yielding much valuable information in the hands of trained and experienced clinicians. One has to admit, however, after placing the results of the two methods side by side, and using not only one's own findings but those of one's colleagues, that there are a great many cases where the ordinary method of examination fails to reveal important changes in the lungs, and also many cases where the information supplied falls considerably short of that furnished by X-ray examination.

The question whether a person is or is not tuberculous is obviously a very grave one to decide, and all reliable methods that are capable of yielding valuable information should be used in order to make the matter as nearly certain as possible.

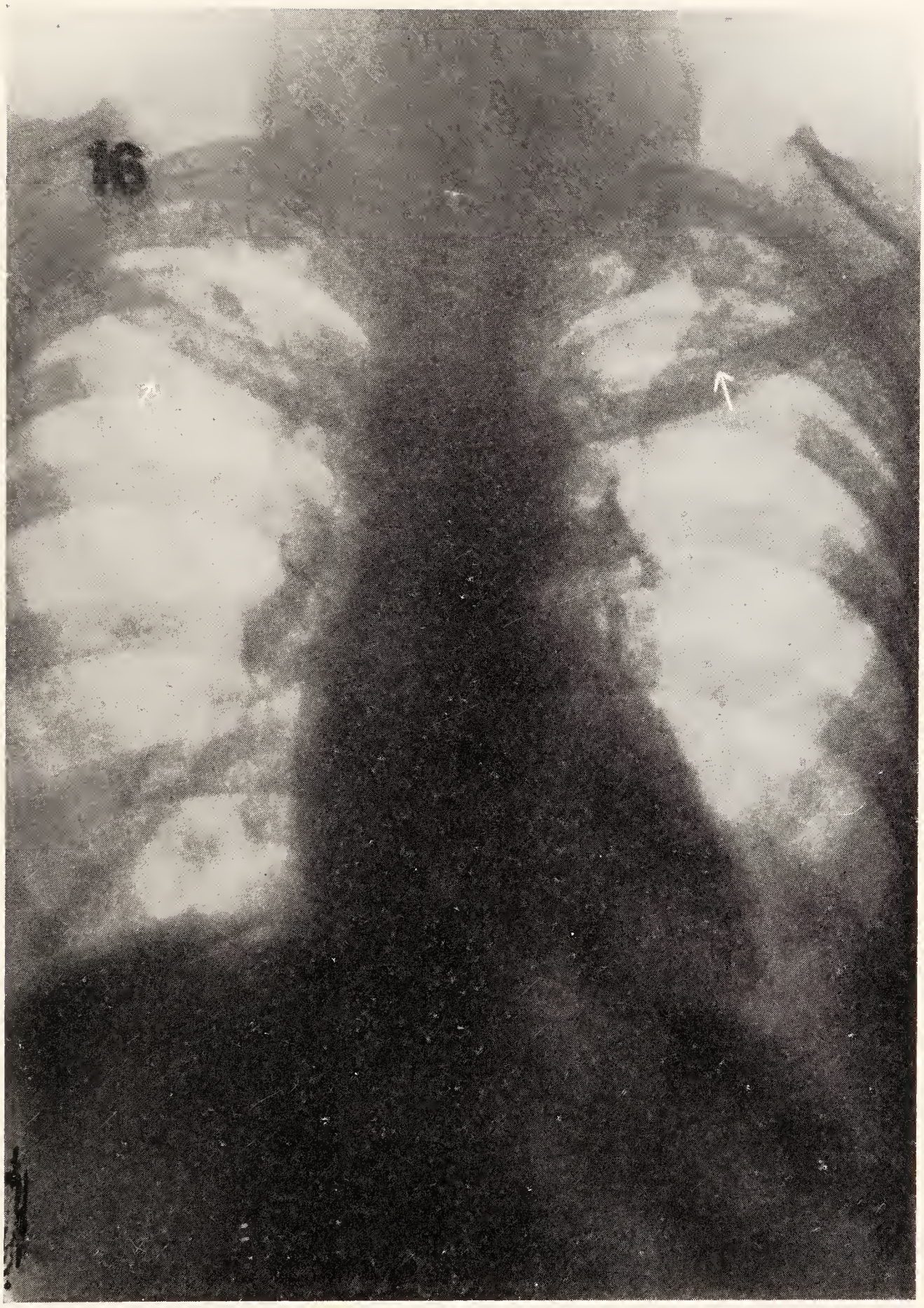
It should be clearly understood that the X-ray examination is only part of the complete examination of the patient. The ultimate diagnosis is arrived at on the evidence supplied by all the various sources, viz.: physical signs, symptoms, sputum examination, X-ray examination, &c. It is not intended to supplant any of the other methods.

In order to obtain full value from its use, it should be employed as a routine method. The selection of a few odd cases for X-ray examination is not likely to succeed in convincing anyone as to its usefulness.

From the experience obtained here, one would say that skiagrams of the chest should always be taken where the other evidence available is negative, and where the symptoms which the patient has are not explained by the other findings. Experience has also shown that skiagrams of the chest should be taken in all contacts of positive cases whether symptoms are present or not, and skiagrams of the chest should be taken in all non-pulmonary cases whether chest symptoms are, or are not, present.

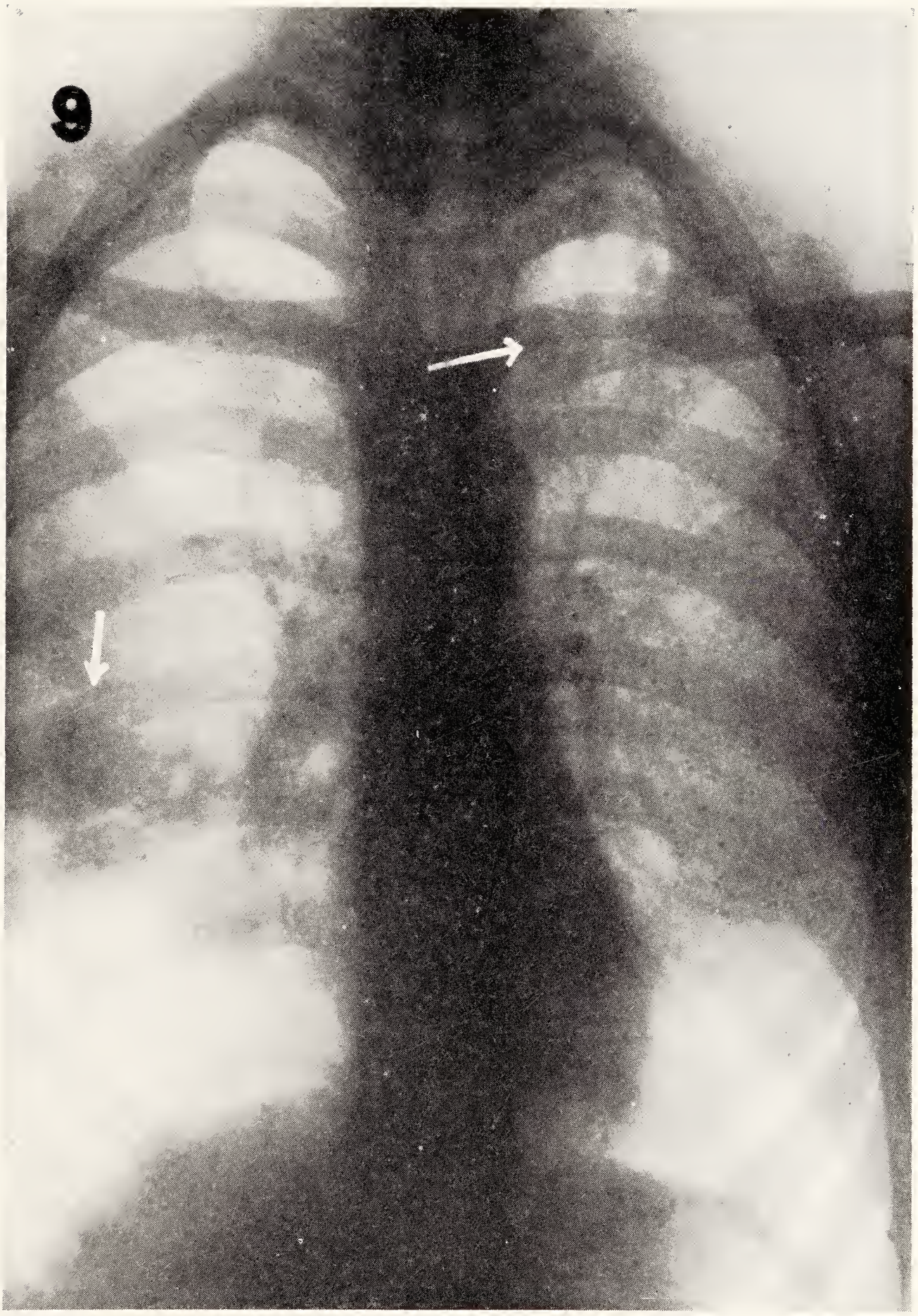
The examination of contacts is a most important part of the work at a dispensary. As one would expect, the earliest definite cases are found among contacts. The main reason for this is that the initiative in being examined does not come from the patients themselves. They are asked to come to the dispensary because of the tuberculous case already discovered in the house.

Experience has shown that an early lesion may be present when the contact patient is quite unaware that there is anything wrong. The earliest symptoms may not point to the chest particularly. In young contacts, especially adolescent girls, slight anæmia is often the first and only symptom, and cough, with other chest symptoms, does not develop till later. Stoppage of the menses in a young female is often one of the first symptoms, and may again precede cough. (See Skiagrams Nos. 2, 3, 17 and 19).



SKIAGRAM NO. 1.—Pulmonary tuberculosis, both apices affected. Disease quiet and probably of long standing. Patient, aged 36 years. Was examined at dispensary because her child, aged 1½ years, had died of tuberculous meningitis. It transpired that another child had died three years previously, also of tuberculous meningitis, and just previous to that the mother had been under treatment for pleurisy with effusion. Patient had neither cough nor sputum when skiagram was taken.

RIGHT SIDE. LEFT SIDE.



SKIAGRAM No. 2.—Pulmonary tuberculosis, patient aged 18 years; central lesion, right lung and early disease at left apex. Examined at dispensary as a contact, his sister being a positive case of pulmonary tuberculosis. He had no cough and no sputum, and did not feel ill. Clinical examination of the chest negative.

RIGHT SIDE. LEFT SIDE.

Where a young member of a family has been found to be suffering from definite tuberculosis, it is most important that the chests of the older members of the family should be examined and skiagrams taken. In middle aged or elderly people the disease may be so quiet as to give rise to little or no incapacity, and the possibility of tuberculosis being present may never be suggested until other cases in the family have occurred, and the health of the contacts has been inquired into. In these old quiescent cases the physical signs may be quite indefinite, or the real condition may be obscured by the presence of chronic bronchitis, and it is not until the skiagram is taken that the real nature of the case is disclosed and the source of infection of the younger patients discovered. (See Skiagram No. 1).

As Sir James Kingston Fowler has said, "the striking distance of the tubercle bacillus is short." When what is supposed to be the first case occurs in a family the source of infection in that case should be looked for not far away, and very often it is found in the patient's home. In fourteen years' experience in the same County area no fact about tuberculosis has impressed itself on one so strongly as this.

The completeness of the information supplied by the ordinary methods of chest examination depends to a considerable extent on the position of the lesion in the chest. If deep seated, the condition may be missed altogether, or the clinician may be able to make only a vague surmise as to what is wrong.

Hilus tuberculosis, i.e., tuberculosis extending outwards from the root, enlargement of the bronchial and mediastinal glands, interlobar pleurisy and empyema, mediastinal growths, aneurism and cysts, are among the conditions where an X-ray examination may discover what has been missed altogether by ordinary methods. Many of the cases of hilus tuberculosis, enlarged bronchial glands and interlobar pleurisy are found among young contacts, many of them children. So long as the condition does not make its way into the lung tissue the outlook for the patient seems to be good, and many of these cases of enlarged bronchial glands and interlobar pleurisy apparently recover with very little in the way of special treatment. This is a very important group of cases, however, and it will be necessary to keep in touch with them for many years in order to ascertain if such cases develop into adult cases of pulmonary tuberculosis at a later age. (See Skiagrams Nos. 5, 16, 17, 19 and 21).

In cases where the diagnosis has already been confirmed by physical signs or sputum examination, it does not follow that X-ray examination is of no value. Skiagrams in these cases may give the tuberculosis officer valuable information as to the process that is taking place in the lungs and the exact nature of the reaction between the tissues and the tubercle bacillus, and thus help him to form a reliable estimate

of the course the disease is likely to pursue. (See Skiagrams Nos. 7, 8, 9 and 15).

In some types of chest it is particularly difficult to assess the extent of the disease by physical signs, e.g., where there has been chronic bronchitis and also where the patient's occupation has previously set up changes in the lungs before infection by the tubercle bacillus. (See Skiagrams Nos. 11, 12, and 13).

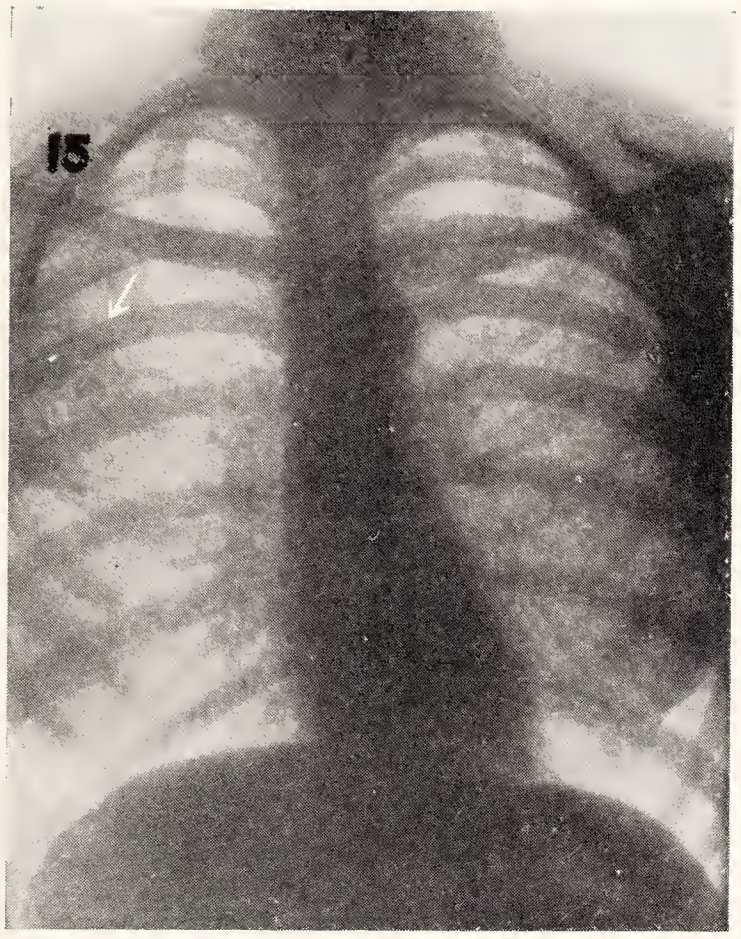
X-ray examination is useful in estimating the progress or lack of progress in the local condition while the patient is under treatment. This applies particularly to cases treated by artificial pneumothorax where the degree of collapse of the lung cannot be accurately estimated without a skiagram. It also applies to cases treated in sanatorium and at the dispensary by artificial sunlight, etc. (See Skiagrams Nos. 17 to 25). It is a feature of the disease that a patient may improve greatly in general condition, so greatly as to obscure the extent of the disease to ordinary examination, but it does not always follow that with this improvement in general condition there has been a corresponding improvement in the local lesion.

An interesting group of pulmonary cases are those discovered in the routine examination of the chest when patients are sent to the dispensary because they have a tuberculous lesion elsewhere than in the lungs. In these cases the disease in the lungs is very often quiescent, the patient having no chest symptoms and the physical signs being quite indefinite. This quiescence of the lesion in the lungs may be an auto-inoculation effect brought about by the presence of the other lesion. It is not uncommon for the lung disease to be unsuspected until the skiagram is taken in these cases. (See Skiagram No. 26).

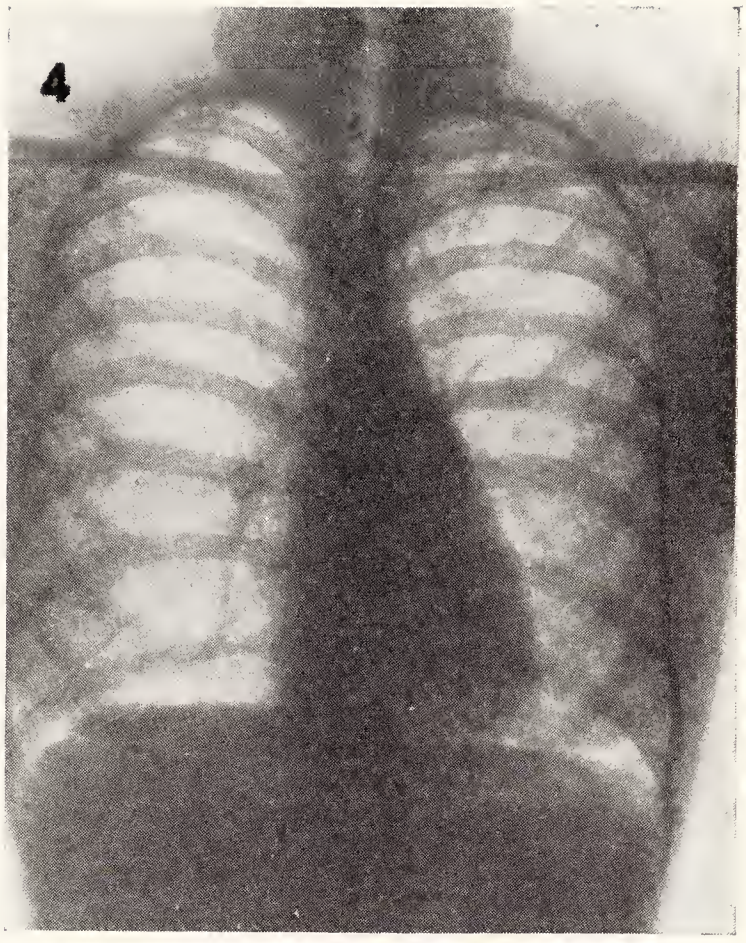
One of the interesting facts which routine X-ray examination has revealed at the dispensary is that spontaneous pneumothorax, with partial collapse of the lung, is not an uncommon occurrence in cases of pleurisy, the condition remaining for only a short time, and expansion of the lung being completely restored.

It is natural that among the many cases sent to the dispensary for diagnosis, other conditions than tuberculosis should be found, because symptoms may be produced by other diseases which are strongly suggestive of tuberculosis. As an example of this one might mention the bleeding that sometimes occurs in heart disease, in bronchiectasis, malignant growths, and aneurism. Post-pneumonic conditions, cysts, and foreign bodies in the chest are other conditions which have been found. In many of these, X-ray examination has decided the diagnosis. (See Skiagrams Nos. 27, 28 and 29).

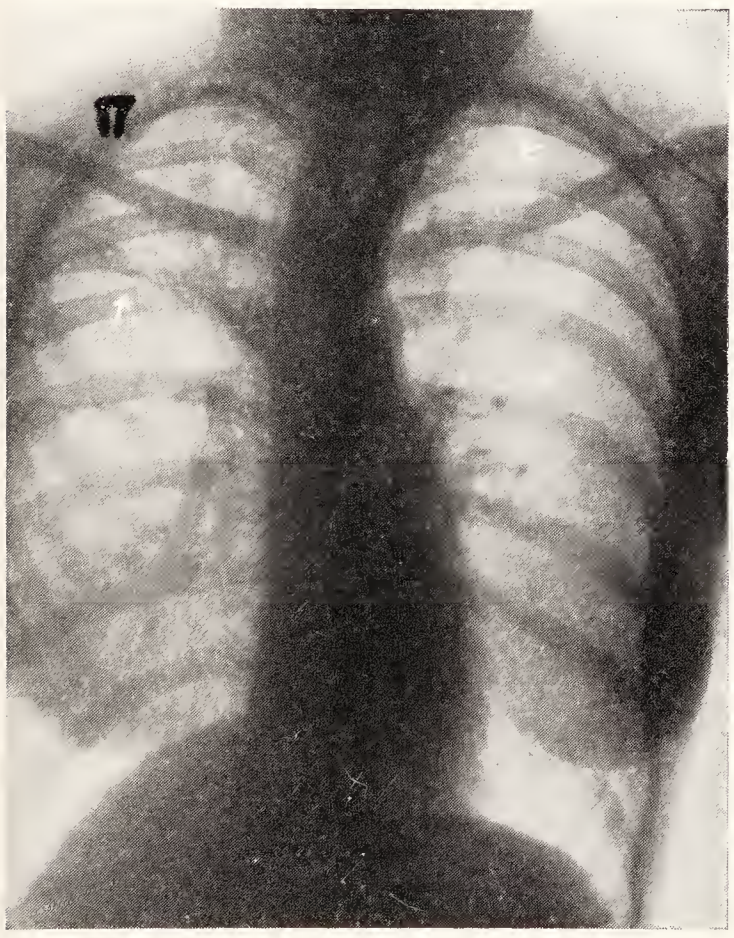
Finally it should be stated that the value of a well taken skiagram which reveals no signs of a tuberculous lesion is very high. It does not absolutely exclude tuberculosis but it is a more reliable negative



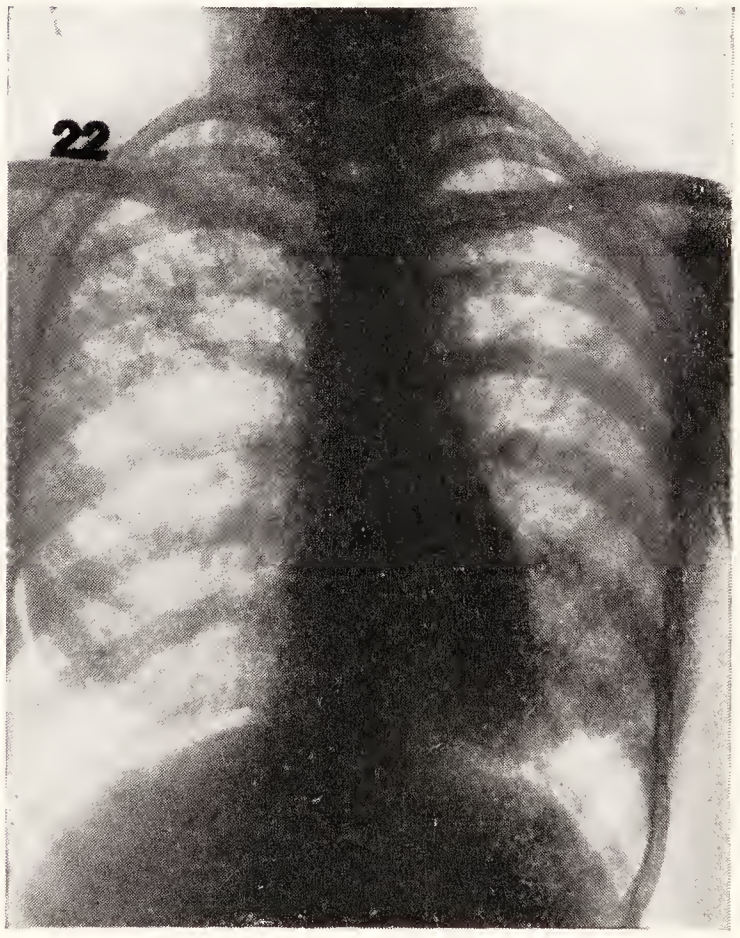
SKIAGRAM No. 3.—Contact examined at dispensary because her sister had pulmonary tuberculosis. No cough, no expectoration. Only symptoms anæmia and lassitude. No physical signs on examination of the chest. Skiagram shows an early lesion in the right lung, a common site for the first appearance of disease as revealed by X-ray examination.



SKIAGRAM No. 4.—Early tuberculosis at the left apex in a woman aged 29 years. No definite physical signs on examination of the chest. Sent to dispensary by own doctor because of anæmia and loss of weight. Had had cough and expectoration for one week only. Sputum negative. An example of prompt reference to dispensary by doctor.



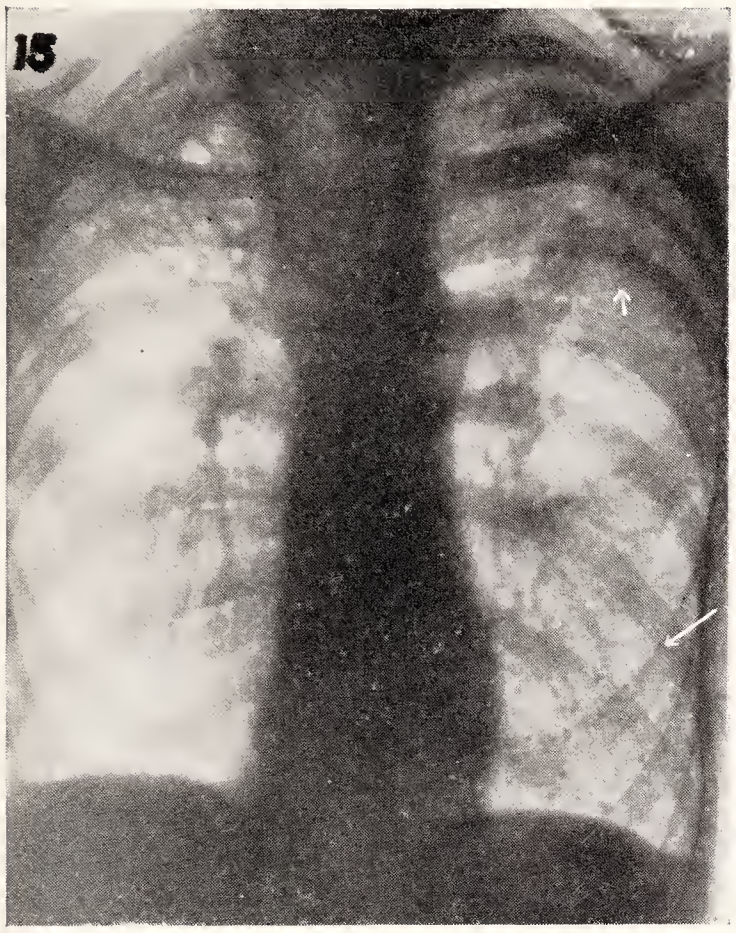
SKIAGRAM No. 5.—Tuberculosis, right upper lobe and left apex in a female patient aged 23 years. Old disease in glands at the roots which are calcified. Diagnosed as suffering from tuberculosis in 1910, when a child of seven years. Was sent to sanatorium then. Skiagram shows condition of lung in 1925, 15 years afterwards. Sputum first found to be positive in December, 1925. A case where tuberculosis in a child has developed into the ordinary type of adult pulmonary tuberculosis.



SKIAGRAM No. 6.—Tuberculosis affecting the upper half of both lungs in a woman, aged 27 years. Her doctor, unable to find the cause for her ill-health referred her for special examination to general hospital. There no definite cause for her illness was found. Sent to dispensary where X-ray examination revealed the above condition. No sputum for examination.

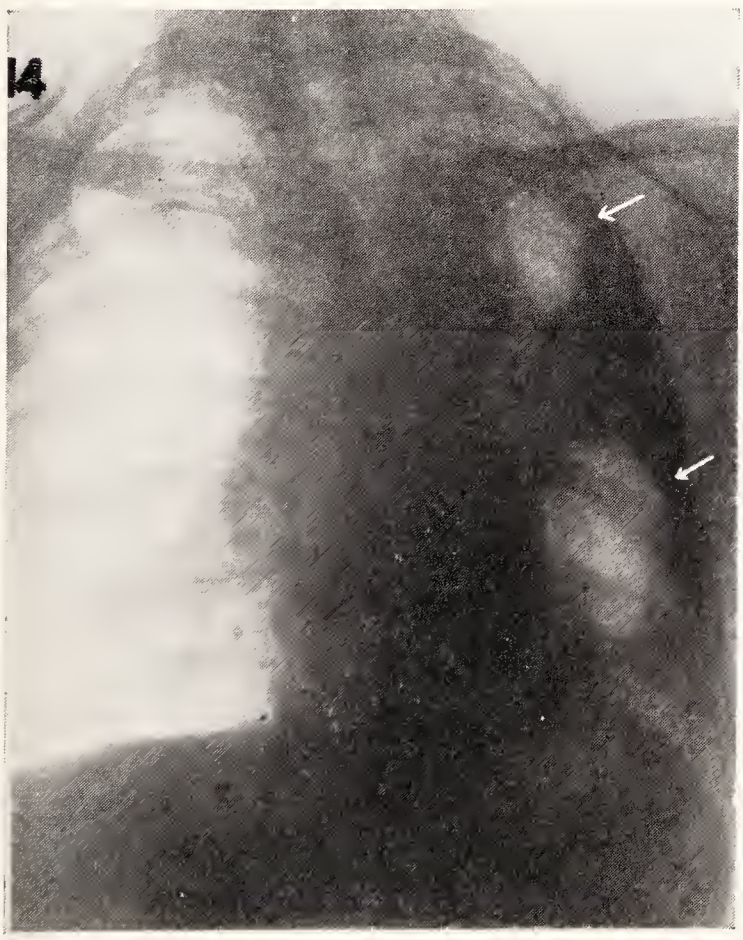
RIGHT SIDE.

LEFT SIDE.



SKIAGRAM No. 7.—Pulmonary tuberculosis in a male, aged 41 years. Fibrosis with contraction of the upper portion of both lungs with many small cavities. Many small calcified foci of disease in the lower part of the left lung. Narrow and tubular heart. Duration of illness to date, 20 years. Sputum still positive.

SKIAGRAM No. 8.—Pulmonary tuberculosis in a male patient, aged 39 years. Old disease in the upper half of the left lung with fibrosis, contraction of the lung and large cavity formation. Heart, mediastinum, and trachea are drawn to the left by the shrinking of the lung. On the right side several large foci of disease which have healed by calcification. The reaction of the patient to the disease in one lung is quite different to that in the other. Duration of illness to date, 13 years. Sputum still positive.



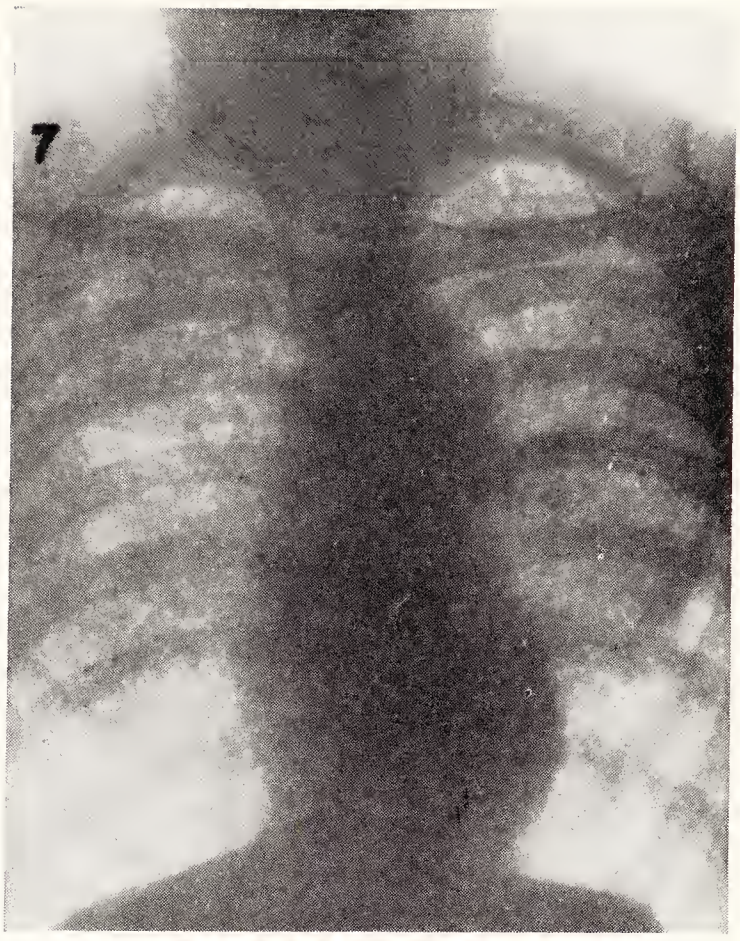
SKIAGRAM No. 9.—Pulmonary tuberculosis in male, aged 56 years. Dense fibrosis and contraction of the whole of the left lung, with two very large main cavities. Trachea and heart pulled to the left. Slight disease in right lung. Duration of disease, 8 years.

SKIAGRAM No. 10.—Example of annular or ring shadow on right side in a female patient, aged 24 years. This is not a cavity but has been caused by localized pleurisy. Note that there is no evidence of fibrosis round it. Compare with cavities in the previous skiagram.

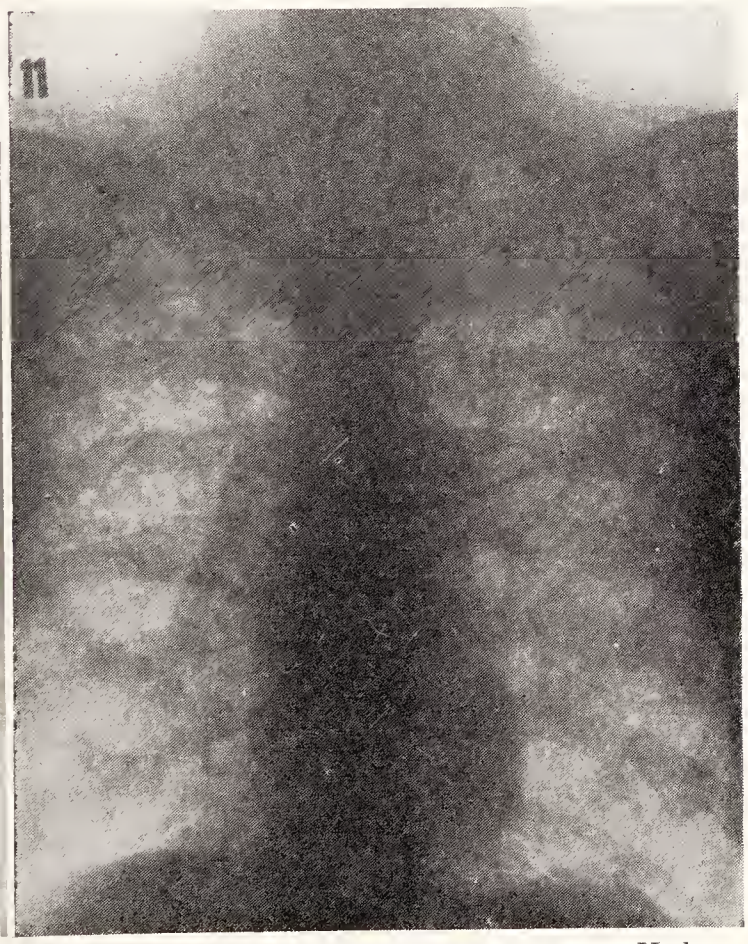
RIGHT SIDE.

LEFT SIDE.

SKIAGRAM No. 11.—Silicosis of the lungs contracted in the South African gold mines. Patient returned to this country after contracting the disease. Sputum always negative. Note the heavy root shadows, the irregular widespread mottling with thickening of the "bronchial" shadows. Compare the shape of the heart with that in skiagrams Nos. 7, 8 and 13, where the condition in the lungs is tuberculous.



SKIAGRAM No. 12.—Patient, aged 48 years, has been a coal miner for 30 years. No tubercle bacilli found in the sputum as yet. Hewer of coal where there has been a high proportion of stone dust. Widespread and heavy mottling not specially confined to the apices.

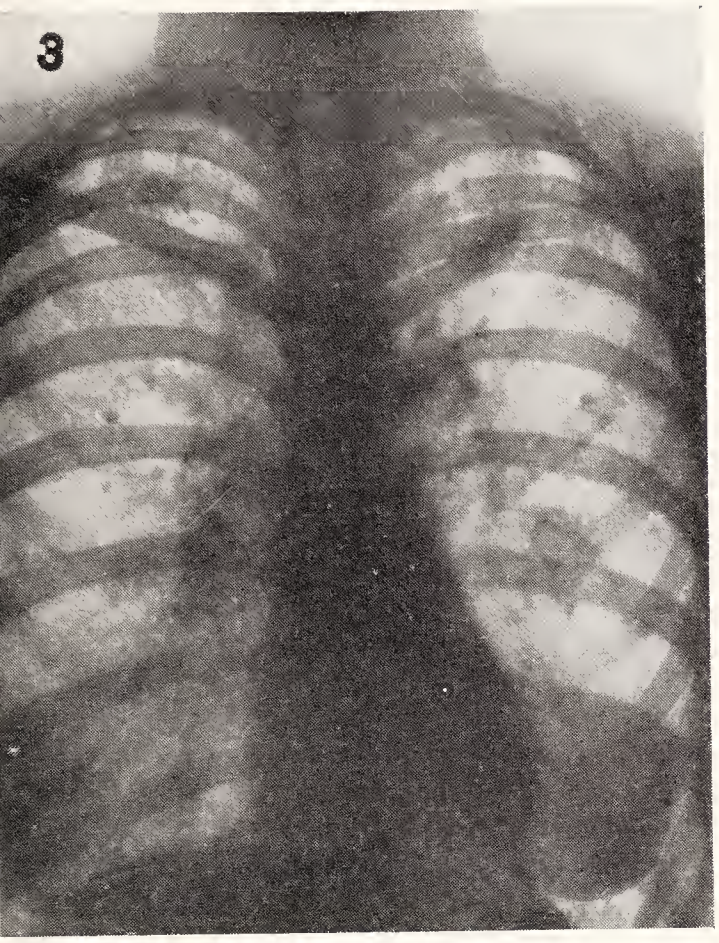


SKIAGRAM No. 13.—Patient, aged 46 years. Had been a quarryman for seven years. Sputum positive. In this case there is a combination of tuberculosis and silicosis due to the stone dust. Note the tubular heart and the widespread fine mottling, densest at the apices.

RIGHT SIDE.

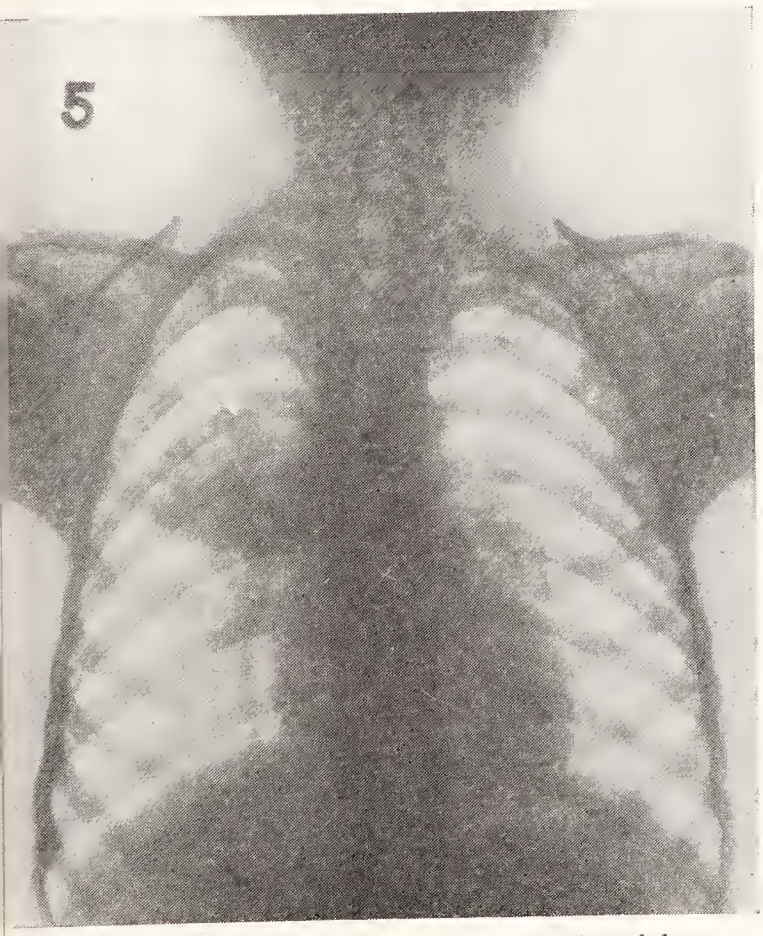
SKIAGRAM No. 14.—A case of chronic bronchitis with valvular heart disease. Note the heavy root shadows and the thickened "bronchial" shadows due to congestion, the increased transparency of the lungs owing to emphysema, the wide spaces between the ribs and the contraction of the lower part of the chest due to the chronic cough, etc.

LEFT SIDE



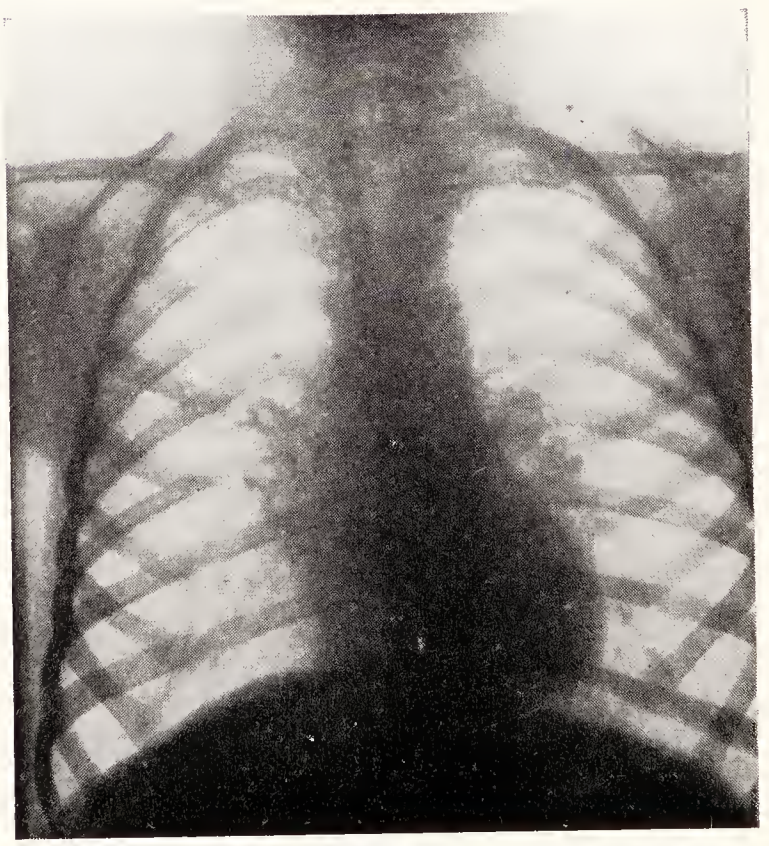
SKIAGRAM No. 15.—Healed phthisis, with calcareous opacities, sharply defined, visible throughout both lungs, and particularly well marked in the apical regions. There are now no indications of active or progressive disease to clinical examination, and no positive sputum result has been obtained for many years.

SKIAGRAM No. 16.—Pulmonary tuberculosis in male, aged 45 years. Sputum positive. Disease spreading outwards from both roots. Hilus disease has been stated never to occur in the adult. This appears to be a good example of such. It is certainly uncommon, but it does occur.



SKIAGRAM No. 17.—Hilus disease with interlobar pleurisy on the right side, discovered in a child who was examined at the dispensary as a contact, his sister having died of pulmonary tuberculosis.

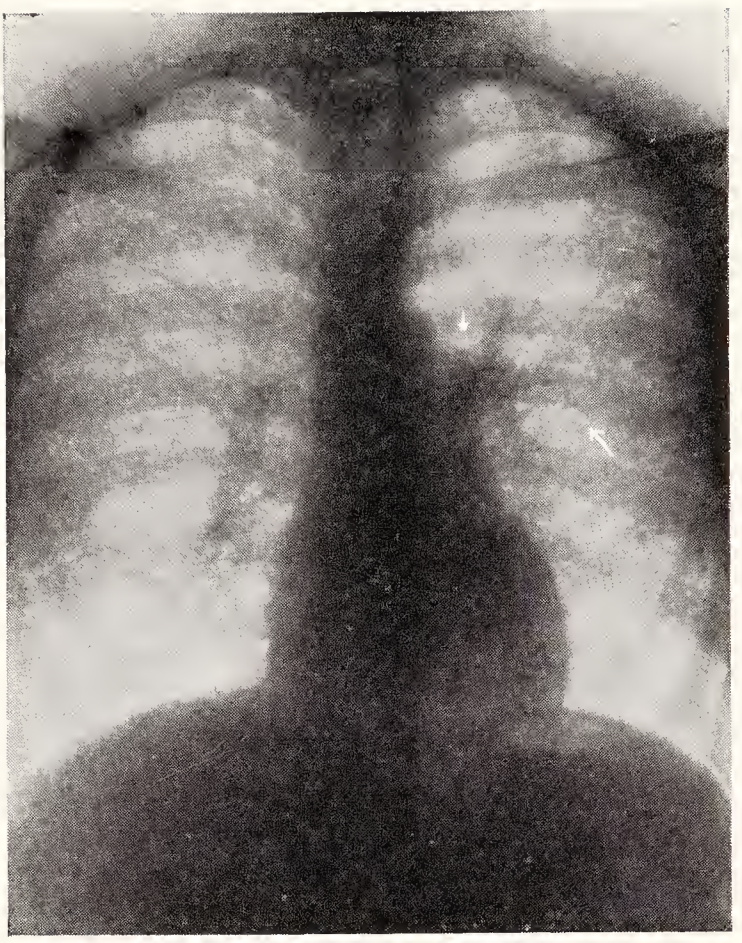
RIGHT SIDE.



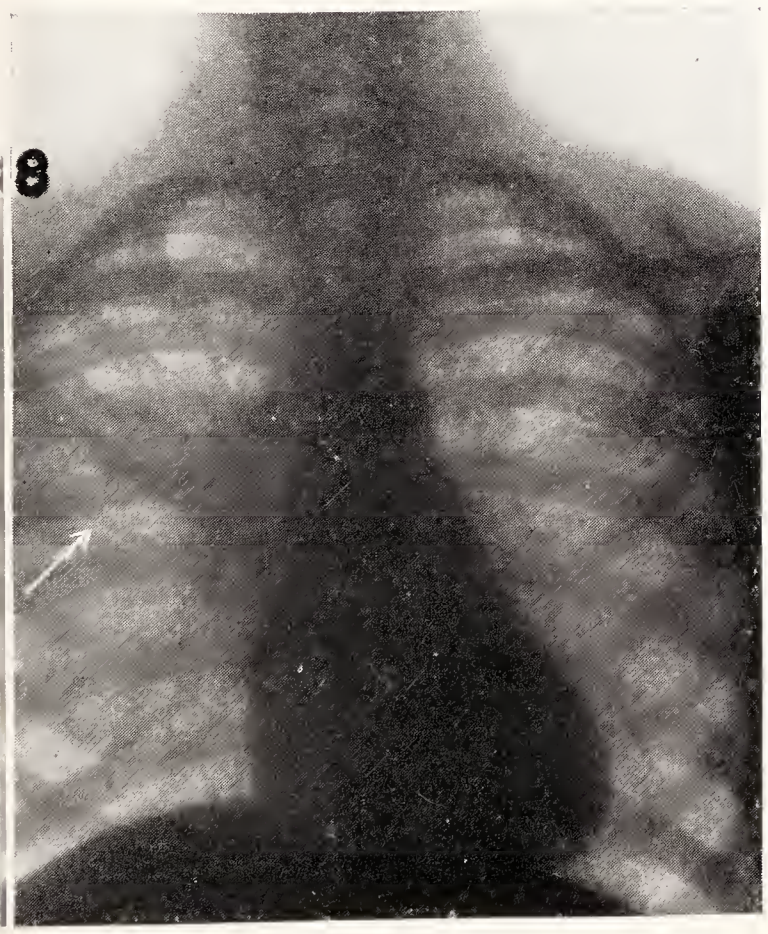
SKIAGRAM No. 18.—The same case as No. 17, 13 months later, showing great improvement after home treatment with a period in the country.

LEFT SIDE.

SKIAGRAM No. 19.—Tuberculosis of the bronchial glands discovered in a male contact, aged 17 years, examined at dispensary, his sisters having been under treatment for tuberculosis. No definite physical signs, but patient had cough and was feeling run down.

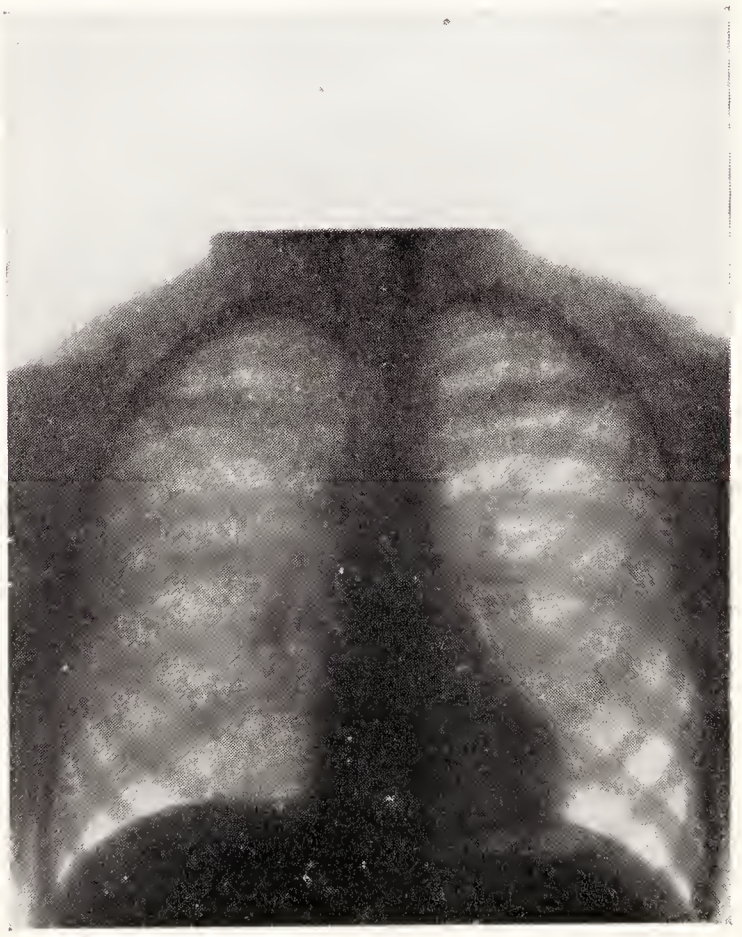


SKIAGRAM No. 20.—The same case as No. 19, four months later. Patient during this time received a course of artificial light treatment at Ashton-under-Lyne Dispensary. Considerable improvement in the condition at the left root, and patient's symptoms have disappeared.



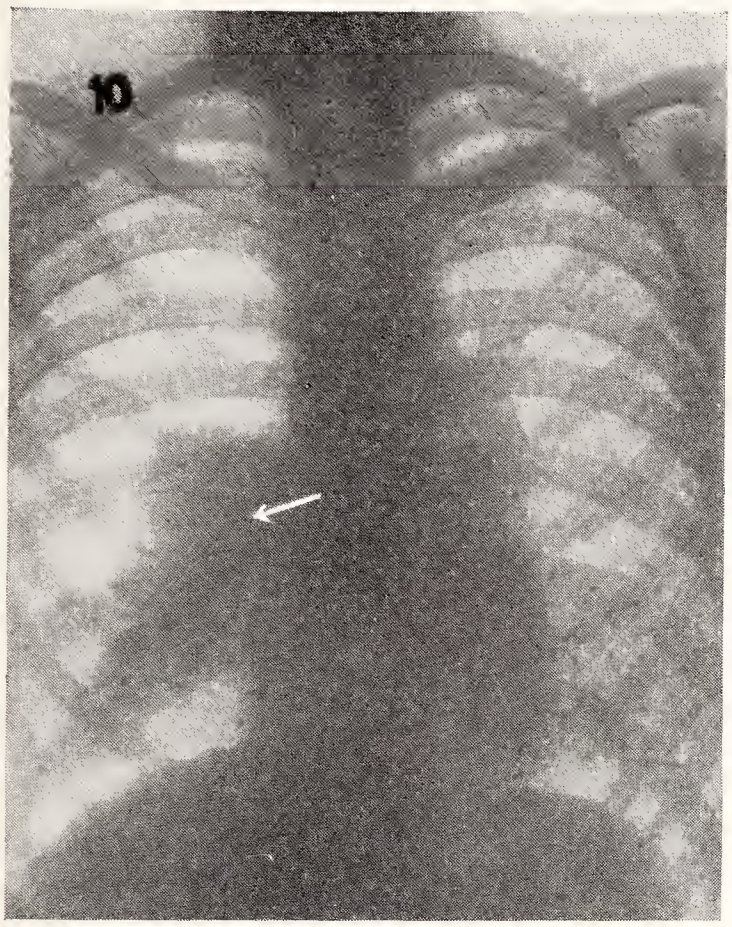
SKIAGRAM No. 21.—Hilus disease on the right side, in a boy, aged 13 years. Referred to the dispensary by his own doctor because of tuberculosis of one of the bones of his hand. No physical signs in the chest, but X-ray examination showed this lesion at the right root.

RIGHT SIDE.

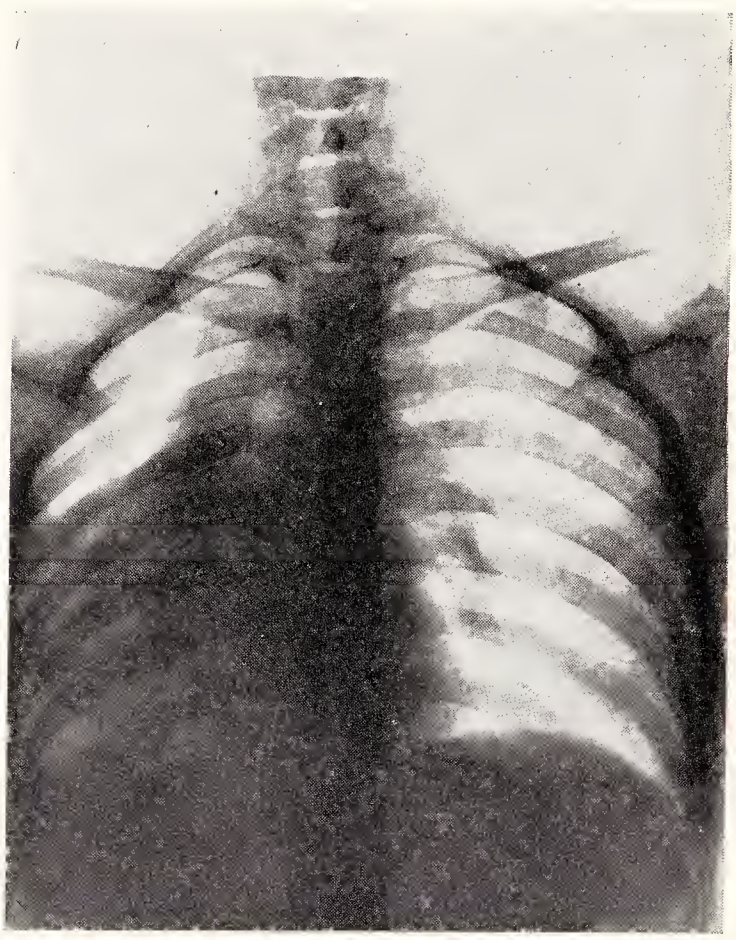


SKIAGRAM No. 22.—The same case as No. 21, four months later, after a course of artificial light treatment at Ashton-under-Lyne dispensary. Considerable improvement shown in the skiagram.

LEFT SIDE.



SKIAGRAM No. 23.—A case of pulmonary tuberculosis where artificial pneumothorax has been produced, the collapsed lung being visible on the right side in the lower part of the chest.



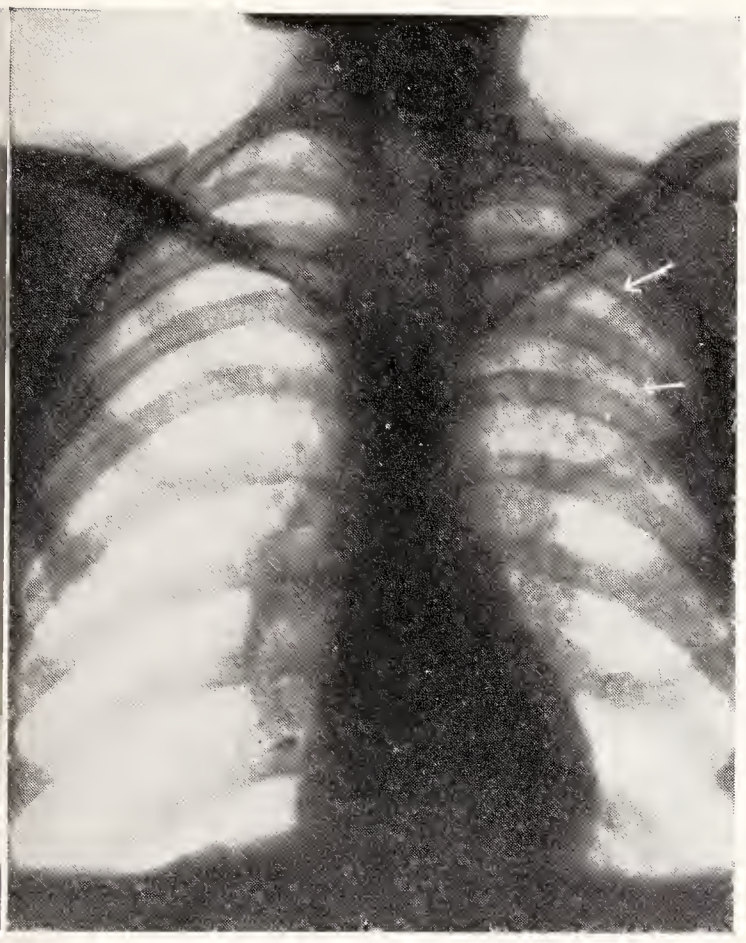
SKIAGRAM No. 24.—The same case as No. 23, after 2 years maintenance of artificial pneumothorax. The lung has been allowed to expand at the end of that time. There is still a small amount of air left unabsorbed, as shown by the clear area in the upper region of the chest.

SKIAGRAM No. 25.—Case where artificial pneumothorax was induced on the right side. A pleural effusion has developed during the course of treatment, the upper level of the fluid being indicated by the horizontal line on the right side. Large adhesions are visible in the upper part of the chest. There is evidence of considerable disease in the left lung. Pleural effusion is a common complication of artificial pneumothorax, and is one of the chief difficulties encountered.

SKIAGRAM No. 26.—Pulmonary tuberculosis in a male, aged 42 years, sent to the dispensary by his doctor because of an abscess in the lumbar region. He had no cough and no sputum, and did not complain of his chest. Physical signs in the chest were very indefinite. The skiagram, however, shows definite disease in the upper portion of both lungs. The case illustrates the necessity of examining the chest in all cases of non-pulmonary tuberculosis.

RIGHT SIDE.

LEFT SIDE.

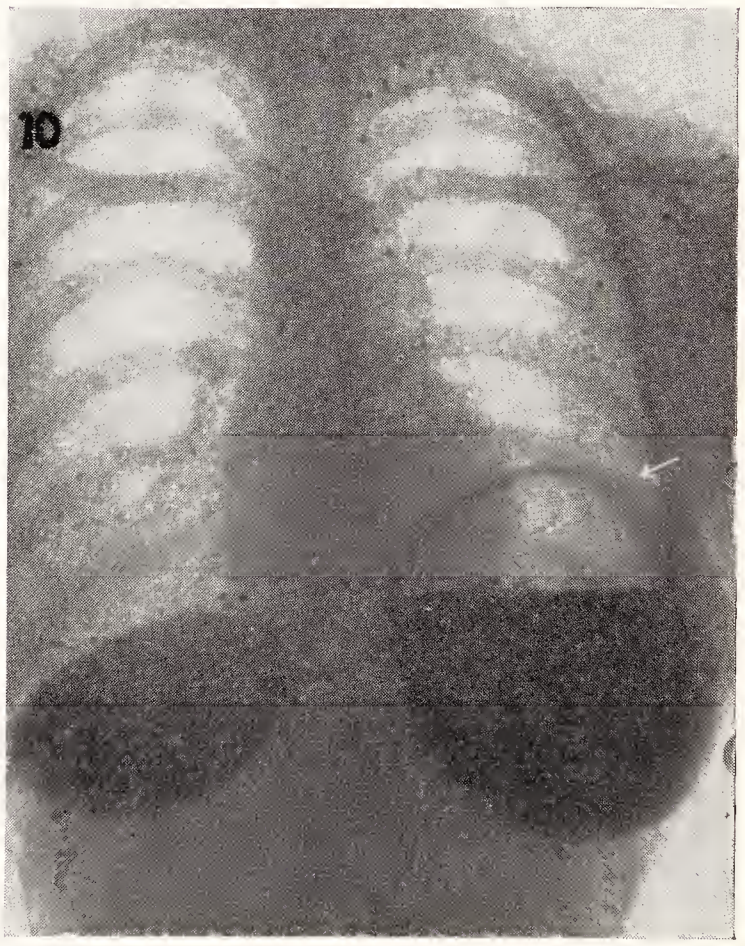


Skiagram No. 27.—Case of Glanders of the Lung.

The disease is indicated by signs of fibrosis in the upper portion of the left lung. Patient contracted the disease in Mexico. It was confined at that time to the skin of the right leg. After arriving in this country he was sent to the tuberculosis officer with signs of lung disease. No tubercle bacilli were found in the sputum, and the diagnosis of glanders was ultimately arrived at by isolation of the glanders bacillus in the sputum, and the diagnosis was confirmed by the pathological tests for the disease. The case ended fatally. Occurrence of the disease in this form and affecting man is very rare in this country.

Skiagram No. 28.—Case of malignant disease of the mediastinum. The tumour is seen projecting outwards into the left side of the chest. Note that the trachea and mediastinum are pushed slightly to the other side, not drawn over to the same side as occurs with fibrosis. The shadowing of the lung above the upper limit of the tumour is probably due to pressure on that portion of the lung, causing deficient air entry. The case was sent to the dispensary for diagnosis on account of symptoms suggesting tuberculosis.

RIGHT SIDE.



Skiagram No. 29.—Eventration of the left diaphragm, a rare condition, said to be due to atrophy of the diaphragm muscle. In the skiagram the arrow points to the outline of the diaphragm which is at a very much higher level than usual, the normal level being below that of the diaphragm on the right side. Skiagram disclosed the condition in a patient sent for examination of the lungs.

LEFT SIDE.

SKIAGRAM No. 30.—Early tuberculosis of hip joint in a patient, aged 14 years. The arrow points to the diseased joint. There is some erosion of the upper part of the head and neck of the thigh-bone, and there is also slight erosion of the acetabulum. There is slight upward displacement of the femur.

SKIAGRAM No. 31.—Pseudo-coxalgia, right hip joint. The arrow points to the diseased joint. This condition was often confused in the past with tuberculosis of the hip joint, but X-ray examination usually makes the condition clear, together with certain clinical signs. Note that the epiphysis of the femur is flattened and broken up. The neck of the bone is thickened. There is no upward displacement, and the thigh-bone remains in fairly good position.

RIGHT SIDE. LEFT SIDE.

SKIAGRAM No. 32.—Skiagram of lower portion of the spine in patient sent to dispensary for diagnosis because of suggestive symptoms. No signs of spinal disease found. A negative skiagram.

RIGHT SIDE. LEFT SIDE.

SKIAGRAM No. 33.—Tuberculosis of knee joint showing erosion of the outer condyle of the femur and also disease affecting the epiphyses of both bones. Bony union taking place.

in my opinion than a negative sputum result or negative physical signs, and there is no doubt that with the result of the other methods corroborated by a negative skiagram one feels much safer in coming to a decision that a patient is not suffering from tuberculosis.

The skiagrams reproduced in this chapter were taken by the consultant tuberculosis officers shown hereunder :—

No. 25, by Dr. A. D. Brunwin, at the Lancaster Chief Dispensary (Area No. 1).

Nos. 1–10, 12–14, 16, 19–22, 26, 28–31, by Dr. J. Logan Stewart, at the Ashton-under-Lyne Chief Dispensary (Area No. 3)

No. 33, by Dr. G. Jessel, at the Eccles Branch Dispensary (Area No. 4).

Nos. 15, 17, 18, 23, 24, by Dr. C. W. Laird, at the Seaforth Chief Dispensary (Area No. 5). No. 32 also taken by Dr. Laird at the Rufford Pulmonary Hospital.

Nos. 11 and 27, by Dr. E. H. Allon Pask, at the High Carley Sanatorium.

RESEARCH WORK AND NEW METHODS OF TREATMENT.

The policy of the County Council is to encourage the tuberculosis medical staff, in addition to their ordinary duties, to engage in research work and to give trials to the various new methods of treatment of the disease which are from time to time advocated prima facie as cures for tuberculosis, provided, of course, that there are one or more patients prepared voluntarily to co-operate in the experimental work. The Council voted a sum of £200 for research work during the financial year 1926–27.

In last year's report, I enumerated eight main subjects into which the whole or one or other of the medical staff had carried or were carrying out original research. Several of these subjects are still being followed up, such as (1) the fate of young children of tuberculous households; (2) the value of sanatorium treatment as compared with home treatment; (3) the circumstances attending non-notification and late notification of cases of tuberculosis. One or two new subjects have been added during the year, as, for instance (4) the proportion of cases diagnosed in the first place by X-ray examination alone, and eventually confirmed by clinical findings; (5) the types of lamps and carbons for artificial light treatment most suitable for use in dispensaries, and the general convenient working (in regard to frequency of patients' attendance, staff, types of case) of a dispensary light centre.

Whilst this research work has taken up some of the time of the staff it nevertheless has the effect of stimulating initiative, thought and study, and it also makes known our experience on particular matters in the Administrative County—which has the largest population of any unified scheme in England—and assists in the discovery of peculiarities, weaknesses, as well as means for the improvement of tuberculosis schemes and statistics.

New methods of treatment have been tried generally on patients at County sanatoria and hospitals, as it has been found more satisfactory to have the patients under the constant supervision, care and control of the medical superintendent and his staff.

I reported last year that nine new methods of treatment had been tried, and that in eight of them the results had not justified the benefits claimed. The trial of the ninth (the Newel treatment) was not completed until the end of 1925, and I now have to state that it has not been successful.

The following additional new methods of treatment have been tried since the last report :—

(1) Colloidogenine, a glyeerated extraet of pig spleen, given hypodermically, or in syrup form by the mouth. Preparation advoeated by a French doctor. Tried on eight County patients without, however, eonfirming the claims made as to its benefit in the treatment of tubereulosis. The tests were very severe as all the eases were advanced ones. Dr. A. D. Brunwin, who carried out the experiment, considers the preparation worthy of further trial and it is still being used on three patients in Area 1.

(2) Angiolymphe, a preparation of vegetable origin administered by injeetion; advocated by Dr. Rous, of Paris, and other foreign tuberculosis specialists. Suffieient time has not elapsed for a definite result, and the suggested remedy is still under trial.

There is nothing further to report in regard to Mr. Spahlinger's method of treatment, as no supply of the partieular vaceines and sera has yet become available for purposes of trial, although efforts have been made to obtain all or some of the preparations.

Although no speeifie remedy has yet been found for tubereulosis, the fact must not be overlooked that by the ordinary methods of treatment some 1,662 patients (800 pulmonary and 862 non-pulmonary) diagnosed and notified as suffering from tubereulosis were, up to the end of 1925, written off the register of tuberculosis cases as " Cured." As suggested by the Ministry of Health, a pulmonary ease is eonsidered cured if without symptoms for five years, and a non-pulmonary ease if without symptoms for three years.

ARTIFICIAL LIGHT TREATMENT.

During recent years considerable progress has been made in the treatment of lupus and other non-pulmonary tuberculous lesions, by means of artificial light. Early in 1925, the County Council considered the desirability of taking steps to commence artificial light treatment at the County dispensaries, and also at the County sanatoria and hospitals. Before embarking on any large scheme for the provision of light treatment, many factors have to be taken into consideration, such as the accessibility of and the accommodation at the dispensaries (particularly the size of the rooms, the ventilation, and the supply of electric current), the number of County cases and the type of case most likely to benefit by the treatment, the staff necessary, the number of hours per day during which treatment can be given, and the frequency of attendance by patients.

In order that all these points might be studied, the County Council authorized, in May, 1925, certain initial steps to be taken to provide artificial light treatment. First, two of the consultant tuberculosis officers (Dr. J. Logan Stewart and Dr. A. D. Brunwin) were granted leave of absence to enable them to attend and study the technique of the treatment at existing light centres under eminent authorities on the subject. Then two small light installations were set up, one at the Ashton-under-Lyne Chief Dispensary, and the other at the Lancaster Chief Dispensary, for which Drs. Stewart and Brunwin, respectively, are responsible.

The types of lamp in use at the two dispensaries are as follow :—

Ashton-under-Lyne.—Long Flame Carbon Arc Lamps (Eidinow) 30 amperes each, 2 ; Atmospheric Mercury Vapour Lamp (3 amperes), 1 ; Kromayer Quartz Lamp (4 amperes), 1*.

Lancaster.—Long Flame Carbon Arc Lamp ("Alpine Sun"), 4 electrodes, 17 amperes, 1 ; Atmospheric Mercury Vapour Lamp, $2\frac{1}{2}$ amperes, 1.

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* One Carbon Arc Lamp and the Kromayer Quartz Lamp were the gift of the Ashton-under-Lyne and District Voluntary Care Committee to the County Council.

Preliminary Results of Treatment.

The following Table 4 shows the condition of the patients who had completed, or who were still undergoing, treatment on the 31st May, 1926 :—

TABLE 4.

Dispensary.	Date Light Department Opened.	Number of Cases. ‡	Condition of Patients on 31st May, 1926.			
			Quiescent and apparently cured.	Improved.	Stationary.	Worse.
Ashton-under-Lyne	1925. 11th Sept.	97	22	68	6	†1
Lancaster ...	15th July	28	8	17	3	—
TOTAL	—	125	30	85	9	1

† Had amyloid disease.
‡ The cases were mainly lupus, (45) ; tuberculous adenitis (39) ; and tuberculosis of bones and joints (25).

The results so far achieved at the two experimental light centres have been very satisfactory, and the data being accumulated will be much more valuable when a longer period—say an average of 12 months' treatment of patients—has elapsed.

While the beneficial results of artificial light treatment, if administered by persons expert in the technique, are generally admitted for certain diseases, there is some difference of opinion as to the relative merits of the various lamps in use for giving the treatment. The controversy mainly centres on the value of the long flame carbon arc lamp (the patients being exposed up to half an hour) as compared with the short-flame carbon arc, as advocated by Finsen (the patients being exposed up to $2\frac{1}{2}$ hours), and on the relative merits of the carbon arc lamp and the mercury vapour lamp.

So far as our results go, it may be said that both the tuberculosis officers (who have had the opportunity of observing one another's cases) have come to the conclusion that the long-flame carbon arc lamp is the most satisfactory and the most suitable for the majority of Lancashire tuberculosis patients in need of artificial light treatment at the dispensary, if there be in addition a mercury vapour lamp for cases requiring local treatment.

Artificial Light Treatment at Institutions.

During 1926, as a preliminary measure, a mercury vapour lamp was provided at the Elswick Sanatorium and another at the Rufford Hospital. At both these institutions a small number of cases of non-pulmonary tuberculosis are under treatment, and while natural sun-light is used when the conditions allow, it is necessary to be able to give artificial light treatment, particularly during the winter months. The lamps are proving extremely useful, but sufficient time has not elapsed to give any results.

THE NOTIFICATION OF TUBERCULOSIS CASES.

It is the statutory duty of every medical practitioner to notify within 48 hours to the local medical officer of health any case of tuberculosis occurring in his practice. The medical officer of health is charged with the duty of keeping a register of all cases of tuberculosis reported in his sanitary district, and commencing on the 1st January, 1925, every medical officer of health is required as soon as practicable after the end of each quarter to furnish to the County medical officer of health a return containing the following information, divided as between males and females, and pulmonary and non-pulmonary :—

(*a*) The number of cases of tuberculosis on his register at the commencement of the quarter ;

(*b*) The number of cases notified to him under the Regulations of 1912 for the first time during the quarter ;

(*c*) The number of cases removed from the register during the quarter (giving the name and address of each such case, and the reason for such removal) ; and

(*d*) The number of cases remaining on the register at the end of the quarter.

These returns for the last quarter of 1925 give a total of 12,710 tuberculous persons on the registers of the 121 sanitary authorities in the County. This figure includes, however, all the notified cases in asylums, union infirmaries and other public institutions, and cases which are not suitable for treatment under the County scheme. Whilst the registers are not all yet entirely correct, the new regulation has given us for the first time a fairly dependable census of the total tuberculous persons in all circumstances in the Administrative County.

The County staff has been glad to assist medical officers of health in revising their registers to start the new procedure. The position in Lancashire has, I think, been better than in many other parts of the country, because for several years medical officers of health have been notified by me of (*a*) changes of address, (*b*) deaths from tuberculosis, by means of copies of the registrars' weekly returns, (*c*) deaths of notified tuberculous cases from causes other than tuberculosis, (*d*) cases which have become cured, (*e*) cases which have been notified by practitioners in error, (*f*) admission and discharge of patients to and from sanatoria and hospitals—the information being mainly for disinfection purposes but useful also for following the movement of patients, serving as a check on the statutory forms C. and D. In addition to the above, (*g*) the attention of medical officers of health

has been drawn to deaths recorded as due to tuberculosis and which have not been notified during life.

During recent years I have directed special attention to the notification of cases of tuberculosis, and have engaged in correspondence with medical practitioners, medical officers of health, and medical superintendents over many individual cases. The success which has been achieved in securing the notification of so large a proportion of cases would not have been practicable without the cordial co-operation of the local medical officers of health.

In the Administrative County, the decline in the extent of non-notification of pulmonary cases is shown in the following statement :—

No. of Non-notified Fatal Cases of—	1918	1919	1920	1921	1922	1923	1924	1925
Pulmonary Tuberculosis (Consumption) ...	303	221	177	135	105	85	64	67
Non-Pulmonary Tuberculosis ...	137	104	122	96	83	74	65	57
Total	440	325	299	231	188	159	129	124

The deaths in 1925 of cases not previously notified under the Regulations are further analysed in Table 5 below :—

TABLE 5.

	Cause of Death.			Total.
	Pulmonary. Primary	Pulmonary. Secondary	Non-Pulmonary	
No. of deaths of persons at private addresses	38	3	49	90
No. in County Mental Hospitals of persons belonging to County area	3	—	—	3
No. in Union Institutions of persons belonging to County area	15	—	4	19
No. in other public institutions of persons belonging to County area	7	1	4	12
	63	4 (67)	57	124

During 1925, 123 pulmonary and 67 non-pulmonary deaths occurred outside the County area of persons usually residing in the Administrative County. Of these, 109 pulmonary and 65 non-pulmonary occurred in public institutions. In 51 instances no case notification could be traced. These are not included in Table 5.

Since 1920 special investigations have been made into every individual death recorded from tuberculosis which had not been previously notified as a case under the Regulations, and the results of the investigations in 1925—which confirmed the findings of previous years—showed that 16 per cent. of the deaths at private addresses related mainly to fulminating cases of pulmonary tuberculosis in adults and acute cases of meningitis in children with no doctor in attendance at all, or only for a matter of a few days prior to death. Again, in 31 per cent., notification was not made owing to a misunderstanding of the Tuberculosis Regulations or to the belief that the case had already been notified by another practitioner.

The efficiency of notification varies directly with the efficiency of the county council or county borough scheme dealing with tuberculosis. If there is no really comprehensive scheme ; if there are poor and newly qualified part-time and badly paid tuberculosis officers ; if there are insufficient means for expert diagnosis, and too few beds for treatment ; then a high proportion of non-notified fatal cases will be the rule and not the exception.

APPLICATIONS FOR TREATMENT.

Table 6 below shows the number of "new" persons (2,108) who applied for treatment under the County scheme during the year 1925 :—

TABLE 6.

	Number of Applications received during 1925.	Number Received Treatment.			
		Pulmonary Cases.	Pulmonary and Non-Pulmonary.	Non-Pulmonary Cases.	Diagnosis not Confirmed.
Men	830	636	28	143	23
Women ...	736	534	26	163	13
Boys	284	48	9	208	19
Girls	258	53	10	178	17
TOTAL ...	2108	1271	73	692	72

N.B.—In this table a person who received treatment within the period appears once only, even though he has received treatment in more than one form.

Applications received in previous years were :—1924, 2,259 ; 1923, 2,266 ; 1922, 2,099 ; 1921, 2,264 ; average for 1918-20, 2,304 ; and 1914-17, 1,790.

During 1925, there were 2,873 cases notified under the Public Health (Tuberculosis) Regulations as suffering from tuberculosis (all forms) ; whereas the number of persons who applied for treatment to the County Council was 2,108, equal to 73 per cent. of the notifications.

With regard to the balance (approximately 27 per cent.) of the notifications where the patients did not apply to the County Council for treatment, the principal reasons for this were : patients suffering from meningitis or other early fatal forms of the disease ; patients removed out of County area ; cases in which the diagnosis was not confirmed and no treatment required ; and patients who, for some reason or other, did not wish to avail themselves of the benefits under the County scheme.

STAGE OF DISEASE OF NEW ADULT PATIENTS SUFFERING FROM PULMONARY TUBERCULOSIS.

During 1925, applieations for treatment were reeeived from 1,224 new adult patients (*i.e.*, 15 years and over), and these were reported by the tubereulosis offieers to be in the undermentioned stages (Turban-Gerhardt) of the disease on the first examination :—

Early, or first stage	341, or 27·9 per cent.	
Intermediate, or seeond stage ...	613, or 50·1 per cent.	
Advanced, or third stage	256, or 20·9 per eent.	
Diagnosis doubtful	14, or 1·1 per eent.	
	1,224	100·0

In regard to the " doubtful " cases, it has been the practice to review the diagnosis at the end of the partieular year of applieation, and if by then the case has been definitely established to be tuberculosis, it is classified under the appropriate stage. Thus, in 1925, on the first examination by the tubereulosis offieer, there were 52 patients in whom the disease was " doubtful," but as the result of subsequent examinations 38 were definitely diagnosed and disposed of to the various stages (stage I. 20, stage II. 13, and stage III. 5), leaving 14 still " doubtful " at the end of the year.

The stage of the disease on the patient first coming under the tubereulosis scheme has an important bearing on the prospeets of successful treatment, and the table below has been prepared to show the position in regard to adults applying for treatment during the past ten years :—

TABLE 7.—*Stage of disease of new adult patients applying for treatment.*

Pulmonary Tuberculosis.	Year of Application.									
	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	**1925.**
	%	%	%	%	%	%	%	%	%	%
†Stage I. ...	38·0	42·9	41·3	40·5	31·9	31·4	26·4	23·5	28·0	27·9
†Stage II. ...	36·8	35·7	38·5	37·3	42·4	40·7	40·2	47·7	45·4	50·1
†Stage III. ...	23·8	19·4	17·1	17·9	21·6	24·2	28·7	26·3	24·3	20·9
Doubtful ...	1·4	2·0	3·1	4·3	4·1	3·7	4·7	2·5	2·3	1·1
Total ...	100	100	100	100	100	100	100	100	100	100

† Classified according to the system of Turban-Gerhardt.

Compared with 1924, there has been a slight improvement in the percentage of advanced (Stage III.) cases, but even so, 71 per cent. of the new cases were either in the intermediate or advanced stages of the disease when they applied to the County Council for treatment.

It is only too well known that, throughout the country generally, tuberculosis officers do not get their new cases early enough, for many patients through ignorance, and no doubt economic reasons, neglect to consult a doctor when in the early stage, and so lessen their chance of recovery. In the Administrative County we have for several years made special investigations into the reasons underlying such disastrous delay on the part of the patients. These investigations have been continued in 1925, yielding the following conclusions, which correspond very closely with the conclusions published in previous reports :—

1.—Altogether 69·5 per cent. of the advanced cases either had no doctor or had only been attending their doctor for less than two months when first examined by the tuberculosis officer or notified.

2.—After making allowance for a percentage of fulminating cases ("galloping consumption"), a large proportion—nearly three-fourths—of patients had been feeling ill for one month or more before consulting a doctor.

3.—The reason for late notification and patients delaying their application until in an advanced stage of the disease is chiefly the disinclination or unwillingness of the patients to report themselves to their doctor when feeling ill. This is due mainly to the insidious onset of the disease, the discomfort being only slight at first.

4.—There does not appear to be evidence in any large number of cases of unreasonable delay in patients being referred by their doctor to the tuberculosis officer.

5.—The initiative to seek treatment when ill rests with the patient himself, and the only feasible remedy lies in the education of the public as to symptoms and common dangers of tuberculosis and the need for securing prompt treatment. This cannot be too strongly or too often emphasised.

While it is easy to talk of enlightening the public, there are many difficulties in the way of reaching the people who most require such education. On the tuberculosis officer rests chiefly the duty of stimulating public interest, but an increasing number of sanitary authorities and voluntary care committees are assisting in propaganda work. More satisfactory results, particularly in the future, would, I think, accrue if a more comprehensive effort were made in the teaching of hygiene to the older children at school and the syllabus expanded to permit this.

Sir George Newman, the Chief Medical Officer of the Ministry of Health, has stated* that "an essential part of any national health policy is the instruction in the principles and practice of hygiene of the great mass of the people. In this, as in other spheres of human affairs, ignorance is the chief curse. We are only now, as knowledge grows, becoming aware of the immeasurable part played by ignorance in the realm of disease. It is hardly too much to say that in proportion as knowledge spreads in a population, disease and incapacity decline; and this becomes more evident as the gross forms of pandemic disease are overcome. As in the individual, so in the community, knowledge is the sheet anchor of preventive medicine—knowledge of the way of health, knowledge of the causes and channels of disease, knowledge of remedy."

The tuberculosis medical staff have to depend very largely on the general practitioners throughout the County for bringing forward tuberculous patients, and it is satisfactory to note that, as reported on page 7, 79 per cent. of new cases are sent *before notification* to the tuberculosis officers for an opinion as to diagnosis. Too much importance is still laid by some doctors on sputum examinations alone, and often too long a time is allowed to elapse in order that the sputum may be tested, or steps are not taken to report the case until it is returned as "positive."

Even when treatment is begun in the early stages of the disease, the experience in this County shows that treatment after a positive sputum makes a fatal result two or three times more likely than when the sputum is negative or absent.

* "An outline of the Practice of Preventive Medicine," by Sir George Newman, 1926.

CARE WORK.

Consumption is the most prevalent form of tuberculosis which is usually a chronic disease, and it attacks chiefly adults in the prime of life. These facts are the basis on which rests the need for and the great value derived from what is termed care work—or after-care work. Care work may be described as something additional to routine methods adopted by a local authority in its tuberculosis scheme for the prevention and treatment of this infectious disease.

Under the Lancashire scheme dealing with tuberculosis, persons who apply for treatment are examined by the tuberculosis officer, either at their homes or at the dispensary, and as and when required are supplied with paper handkerchiefs and sputum flasks, to prevent the spread of infection ; dressings if suffering from " open " surgical tuberculosis ; special nourishment, usually in the form of milk ; thermometers and appliances such as splints, crutches, supports and surgical boots ; and the loan of bedsteads and mattresses, if necessary, to enable patients in an infectious state to have a bedroom to themselves. This may be described as the *preventive* side of home treatment, and is, of course, additional and supplementary to the medical treatment of patients by their own doctors.

The various measures of social insurance (*e.g.*, the National Insurance Acts, the Widows', Orphans' and Old-Age Contributory Pensions Act, the Superannuation schemes of various bodies) are all valuable—and will be more so as time goes on—in reducing the number of cases of distress in tuberculous households.

The Voluntary Care Committees.

Despite these measures and means of assistance there is still ample need for voluntary Care Committees, of which at the end of the year there were 18 recognised by the County Council, the whole covering an estimated population of 797,286 out of an estimated County population of 1,785,500.

Particulars of the populations served, the number of patients assisted, and the amounts expended during 1925 are as follow :—

TABLE 8.—*Summary of Work done by Voluntary Care Committees.*

Name of Committee.	Estimated Population Served 1925	Number of Individual Patients Assisted during 1925	Expenditure during 1925
			£ s. d.
Ashton-under-Lyne & District ...	69,621	72	284 9 3
Bacup and Rawtenstall	50,200	39	28 4 2
Chorley and District	73,782	43	308 1 9
Earlestown, Newton and District	22,293	27	117 6 7
Eccles Guild of Help	45,960	6	3 5 10
Egerton, Eagley and District ...	5,759	3	12 10 10
Farnworth and District	70,037	50	166 14 10
Golborne	7,610	15	74 13 3
Horwich	16,110	17	124 0 9
Huyton-with-Roby District ...	5,321	2	3 1 1
Lancaster and District	77,776	12	62 0 7
Leigh and District	91,094	108	197 1 0
Prescot and District	21,184	18	84 11 10
Prestwich	19,610	...	...
*Radcliffe, Whitefield and District Relief Fund	35,014	25	198 19 4
Stretford Guild of Help	48,460	15	31 4 7
Westhoughton	16,820	19	72 16 6
Wigan County District	120,635	98	141 0 7
TOTAL	797,286	569	£1910 2 9

* Relates to year ended, 31st March, 1926.

The constitution, objects and sources of income of these voluntary bodies have been dealt with in previous reports, and I will only mention that the County Council has continued its grant of $33\frac{1}{3}$ per cent. of the Committees' expenditure on assistance to patients, and that the Ashton-under-Lyne and District Committee have very kindly presented two lamps for artificial light treatment at the Ashton Dispensary for which they have been thanked by the County Council.

The annual reports and balance sheets of the various Committees are considered by the County Tuberculosis Committee of the County Council, who have on several occasions expressed their earnest appreciation of the valuable voluntary work carried out.

In addition to the 18 voluntary Care Committees approved by the County Council, there are in existence many charitable and other organisations to which the tuberculosis officers are able to refer necessitous cases. Particularly, mention should be made of the relief schemes for ex-service men throughout the County provided by: (*a*) the Joint Council of the Order of St. John of Jerusalem and the British Red Cross Society, which deals mainly with tuberculous pensioners, and (*b*) the Council of Management of the United Services Fund, which mainly looks after the interests of those tuberculous men who are *not* in receipt of war pensions.

The Ministry of Health, in a circular issued in December, 1923, laid down a scheme for co-operation between the managers of the various employment exchanges of the Ministry of Labour and the tuberculosis officers with regard to the employment in suitable occupations of male patients on discharge from sanatoria or hospitals. The tuberculosis officer, with his knowledge of a patient's condition, employment (if any) and circumstances, plus the report of the medical superintendent on the man's progress at the sanatorium, is charged with the duty of reporting to the employment exchange any need for a change of occupation or for the provision of suitable employment. The County tuberculosis officers make a practice of conferring with the patient himself before making their recommendation. However, with the present large amount of unemployment in the country, there has not been much chance for the scheme to show good results.

Care work through Dispensary Organisation.

The voluntary Care Committees only cover a little less than half the County, and there is left a balance of nearly 1,000,000 persons to be dealt with by other means, pending the formation of new voluntary Committees. In the areas without Care Committees the County Council charged the tuberculosis dispensary staff with the duty of carrying out the relief work.

With regard to finance, the Council decided to take as a basis the amount voted to the voluntary Committees and in proportion to population to grant a similar sum for the relief of patients in the remainder of the County area. Thus the Council's expenditure on care work is evenly distributed throughout the County, the districts where there are voluntary Committees at work having the advantage of the additional funds obtained by them from outside sources.

Grants to necessitous patients or their dependants are made by the consultant tuberculosis officers by means of written orders on trades-

men in aeeordance with certain general eonditions laid down by the County Counеil.

During 1925, assistance was afforded through the dispensary staff to 186 individual patients, the amount expended being £595 8s. 11d. The assistance was mainly in the provision of milk, groceries, and clothing.

The whole Administrative County is therefore covered by a eomplete and eomprehensive care seheme.

SUMMARY OF WORK DONE THROUGH THE DISPENSARY ORGANISATION IN 1925.

It will be observed from the table on page 33 that 5,677 new persons (including contacts) were examined at their homes or at the dispensaries by the tuberculosis officers for purposes of diagnosis. Visits by the tuberculosis officers to the homes of tubercnlous persons numbered 7,550 (against 7,431 last year), and attendances of patients at the dispensaries numbered 27,570. It will be noted that artificial light treatment was commenced at two dispensaries during the year.

Special attention was paid during the year to reviewing the cases on the register, and the following were written off and will not again be visited or examined :—pulmonary cases found to be cured (*i.e.*, disease arrested for five or more years and no symptoms of disease now present), 428 ; non-pulmonary cases found to be cured (*i.e.*, disease arrested for three or more years and no symptoms of disease now present), 259 ; cases notified in error by practitioners and notifications cancelled, 221 ; cases (not notified) found to be non-tuberculous, 66.

Table A, here inserted, shows the dispensary areas with the population, present staff, the names of all the dispensaries at present in use, and the days and times on which they are open.

Evening Sessions at Dispensaries.

As in previous years, the evening sessions have been regularly held at most of the dispensaries for the convenience of patients who are at work during the day.

Tuberculosis Officers' Visits to Sanatoria and Hospitals.

Periodical visits (mostly monthly) have continued to be paid by one or other of the consultant tuberculosis officers to the majority of the pulmonary hospitals, non-County sanatoria, and special hospitals treating County patients. These visits are of mutual help, inasmuch as they keep in touch the medical superintendent and the tubercnlosis officer, who are able to confer on the patients' future treatment, the home circumstances, the provisions of the County scheme, and so on.

Total Number of Cases under Supervision.

Table 9 shows the total number of persons who were suffering or had suffered from tuberculosis, and who were under the supervision of the dispensary staff at the end of 1925. As a matter of interest, the number of cases per 1,000 of the population has also been calculated for each area :—

TABLE A.

List of Dispensaries and the Tuberculosis Officers for the Dispensary Areas.

Table A.—List of Tuberculosis Dispensaries in use in October, 1926, and the Tuberculosis Officers for the Dispensary Areas.

Dispensary Area No.	SANITARY DISTRICTS.			Estimated Civilian Population 31/12/25.	MEDICAL STAFF October, 1926.	NURSING STAFF.	DISPENSARIES.	Days and Hours of DISPENSARY SESSIONS (Distinct from Home Visiting, attending Sanatoria, Hospitals and Care Committees, etc.)
1	Adlington Blackrod Carnforth Chorley (B.) Chorley (R.) Croston Fulwood Garstang (R.), Part of, consisting of parishes of— Barnacre-with-Bonds Bilsborrow Bleasdale Cabus	Garstang (R.) *continued* Catterall Claughton Cleveley Forton Garstang Holleth Kirkland Myerscough Nateby Nether Wyresdale Winmarleigh	Heysham Horwich Lancaster (B.) Lancaster (R.) Leyland Longridge Lunesdale (R.) Lytham St. Annes (B.) Morecambe (B.) Preston (R.) Walton-le-Dale Withnell	246,641	Dr. A. D. Brunwin, Tuberculosis Dispensary, 8 Middle Street, Lancaster. Assistant Tuberculosis Officer— Dr. G. H. Leigh.	Nurse L. Walker Nurse T. Fielding Nurse F. D. Abhott Nurse J. Skelcher	CHIEF—Lancaster, 8 Middle Street (Tel. No. 568). (X-ray Apparatus) BRANCH—Chorley, 59 Gillibrand Street (Tel. No. 263) BRANCH—Preston, 22 Bolton Street (Tel. No. 1111)	Monday, 12 noon. Thursday morning by appointment. 1st Monday evening in month by appointment. Monday by appointment. Thursday, 11 a.m. 2nd Tuesday evening in month by appointment. Wednesday, 11 a.m. Monday evening before 2nd Tuesday in month by appointment.
	FURNESS SUB-AREA— Dalton-in-Furness Grange-over-Sands	Ulverston	Ulverston (R.)	41,230	Dr. E. H. A. Pask, High Carley Sanatorium, near Ulverston (Tel. No. 110 Ulverston).	Nurse E. A. Duston	BRANCH—Ulverston, Virginia House (Tel. No. 145). (X-ray Apparatus at High Carley Sanatorium).	Tuesday, 10 a.m. Thursday, 10 a.m.
	FYLDE SUB-AREA— Fleetwood Fylde (R.) Garstang (R.), Part of, consisting of parishes of— Great Eccleston Hambleton	Inskip-with-Sowerby Out Rawcliffe Pilling Stalmine-with-Stainall Upper Rawcliffe	Kirkham Poulton-le-Fylde Preesall Thornton	53,652	Dr. G. Leggat, Elswick Sanatorium, near Kirkham (Tel. No. 22 Great Eccleston).	Nurse A. Tweedy	BRANCH—Fleetwood, 23 Poulton Road (Tel. No. 282). (X-ray Apparatus at Elswick Sanatorium).	Tuesday, 10 a.m.
2	Accrington (B.) Bacup (B.) Barrowford Blackburn (R.) Brierfield Burnley (R.) Church	Clayton-le-Moors Clitheroe (B.) Clitheroe (R.) Colne (B.) Darwen (B.) Great Harwood Haslingden (B.)	Nelson (B.) Oswaldtwistle Padiham Rawtenstall (B.) Rishton Trawden Turton	359,226	Dr. B. MacPhee, Tuberculosis Dispensary, 39 Avenue Parade, Accrington. Assistant Tuberculosis Officer— Dr. S. C. Adam.	Nurse L. F. Norwood Nurse E. Watterson Nurse M. Duggan Nurse A. Munro Nurse H. M. Alcock Nurse R. Lambert	CHIEF—Accrington, 39 Avenue Parade (Tel. No. 2443). BRANCH—Darwen, 20 Railway Road (Tel. No. 408). (X-ray Apparatus) BRANCH—Nelson, 64 Carr Road (Tel. No. 507). BRANCH—Stacksteads, Knott Hill House (Tel. No. 201 Bacup).	Tuesday, 10 a.m. and 2 p.m. Wednesday, 2 p.m. 2nd Wednesday of month, 6 p.m. Friday, 10 a.m. Tuesday, 2 p.m. Friday, 2 p.m. 1st Friday of month, 6 p.m. Monday, 2 p.m. 1st Monday of month, 6 p.m.
3	Ashton-under-Lyne (B.) Audenshaw Bury (R.) Chadderton Crompton Denton Droylsden Failsworth Heywood (B.)	Hurst Lees Limehurst (R.) Littleborough Middleton (B.) Milnrow Mossley (B.) Norden	Prestwich Radcliffe Ramsbottom Royton Tottington Wardle Whitefield Whitworth	374,031	Dr. J. L. Stewart, Tuberculosis Dispensary, Boston House, Warrington Street, Ashton-under-Lyne. Assistant Tuhereulosis Officers— Dr. G. Fletcher Dr. C. Berry.	Nurse H. Dewsnap Nurse R. Davison Nurse A. Flynn Nurse M. A. Potter Nurse C. Guilfoy Nurse I. F. MacDonald Nurse A. Flynn	CHIEF—Ashton-under-Lyne, Boston House, Warrington Street (Tel. No. 775). (X-ray Apparatus). BRANCH—Bury, The Wylde (Tel. No. 654). BRANCH—Middleton, 71 Manchester Old Road. BRANCH—Mossley, Park Lodge. BRANCH—Oldham, 25 Barker Street (Tel. No. 1671). BRANCH—Rochdale, 168 Drake St. (Tel. No. 392).	Tuesday, 3 p.m. and 6-30 p.m. Friday, 10 a.m. Monday, 10-30 a.m. for X-ray examinations. Monday, 2.30 p.m. Wednesday, 2.30 p.m. 3rd Wed. of month, 6.30 p.m. Friday, 3 p.m. 2nd Friday of month, 6.30 p.m. Tuesday, 11 a.m. Monday, 3 p.m. 2nd Monday of month, 6.30 p.m. Wednesday, 10 a.m. Thursday, 10 a.m. 2nd Thursday of month, 7 p.m.
4	Atherton Barton-upon-Irwell (R.) Eccles (B.) Farnworth Irlam Kearsley	Leigh (B.) Leigh (R.) Little Hulton Little Lever Stretford	Swinton and Pendlebury Tyldesley-with-Shakerley Urmston Westhoughton Worsley	337,499	Dr. G. Jessel, Tuberculosis Dispensary, 13, Church Street, Leigh. Assistant Tubereulosis Officers— Dr. A. B. Jamieson Dr. J. Catheart	Nurse H. M. Shakespeare Nurse M. A. M. Thornton Nurse M. B. Jones Nurse F. G. Smith Nurse A. Dickinson Nurse D. Grime	CHIEF—Leigh, 13 Church Street (Tel. No. 258). BRANCH—Eccles, 28 and 30 Gilda Brook Road (Tel. No. 533). (X-ray Apparatus). BRANCH—Farnworth, 19–23 Darley Street (Tel. No. 63). BRANCH—Pendlebury, 121 Station Road (Tel. No. 295 Eccles). BRANCH—Stretford, 14 Derbyshire Lane (Tel. No. 110 Trafford Park).	Wednesday, 9.30 a.m. Friday, 9.30 a.m. 2nd Thurs. of month, 6.30 p.m. Tuesday, 2.0 p.m.; 3.0 p.m. for X-ray examinations. Friday, 9.30 a.m. 1st Wednesday of month, 6.30 p.m. Tuesday, 9.30 a.m. Friday, 2 p.m. 3rd Thurs. of month, 6.30 p.m. Monday, 2 p.m. Wednesday, 9.30 a.m. Last Thursday of month, 6.30 p.m. Tuesday, 9.30 a.m. Thursday, 9.30 a.m. Last Monday of month, 6.30 p.m.
5	Abram Ashton-in-Makerfield Aspull Billinge Formby Golborne Great Crosby Haydock Hindley Huyton-with-Roby	Ince-in-Makerfield Lathom and Burscough Litherland Little Crosby Newton-in-Makerfield Ormskirk Orrell Prescot Rainford Sefton (R.)	Skelmersdale Standish-with-Langtree Upholland Warrington (R.) Waterloo-with-Seaforth West Lancashire (R.) Whiston (R.) Widnes (B.) Wigan (R.)	373,221	Dr. C. W. Laird, Tuberculosis Dispensary, 7 Claremont Road, Seaforth. Assistant Tuberculosis Officers— Dr. C. H. Lilley Dr. G. B. Charnock	Nurse A. Duncan Nurse I. Laing Nurse E. Waleh Nurse M. J. Wilson Nurse E. Walters Nurse F. Milnes	CHIEF—Seaforth, 7 Claremont Road (Tel. No. 688 Waterloo). (X-ray Apparatus). BRANCH—St. Helens, 18 Claughton Street. BRANCH—Widnes, Brendan House, Widnes Road (Tel. No. 156). BRANCH—Wigan, 14 Rodney Street (Tel. No. 549).	Monday, 3 to 4.30 p.m. Thursday, 10.30 a.m. for X-ray examinations. Friday, 10 to 11.30 a.m. 3rd Thursday of month, 6 p.m. Tuesday, 3 to 4.30 p.m. Last Tues. of month, 6 to 7 p.m. Monday, 10 to 11.30 a.m. Friday, 2.30 to 4.30 p.m. 1st Wednesday of month, 6 to 7 p.m. Monday, 9.30 a.m. Thursday, 9.30 a.m. 4th Thurs. of month, 6.30 p.m.
				1,785,500				

TABLE 9.—*Tuberculous Cases on Dispensary Registers on 31st December, 1925 (including 790 patients in Sanatoria and Hospitals).*

Dispensary Area.	Estimated Civilian Population, 31–12–25.	Number of Cases under Supervision on 31–12–25.									No. of Cases of Tuberculosis under supervision per 1,000 of Population.	No. of Doubtful Cases on 31–12–25.
		Pulmonary Tuberculosis.				Non-Pulmonary Tuberculosis.				Total No. of Cases.		
		Under 15 years of age.		15 years and over.		Under 15 years of age.		15 years and over.				
		M.	F.	M.	F.	M.	F.	M.	F.			
No. 1 ...	246,641	46	42	358	317	127	121	143	182	1336	5·42	49
No. 2 ...	359,226	11	10	406	278	79	62	147	169	1162	3·23	123
No. 3 ...	374,031	42	60	577	474	154	142	201	242	1892	5·06	11
No. 4 ...	458,134	55	69	767	653	267	232	288	347	2678	5·84	12
No. 5 ...	252,586	80	82	431	307	180	163	114	102	1459	5·78	18
Furness ...	41,230	37	37	94	113	21	5	16	28	351	8·51	33
Fylde ...	53,652	13	9	85	78	40	22	40	27	314	5·85	16
TOTAL ...	1,785,500	284	309	2718	2220	868	747	949	1097	9192	5·15	262
		593		4938		1615		2046				

Summary of Dispensary work done by Tuberculosis Officers in 1925, showing comparison with 1923 and 1924.

I.—VISITS TO PATIENTS AT THEIR HOMES—	1923.	1924.	**1925.**
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	2,005	2,211	1,884
(*b*) Revisits—			
(1) Respecting continued home treatment and dispensary supervision	3,791	4,377	4,760
(2) For other purposes, *i.e.*, Admissions to institutions, after discharge from institutions, re-examinations of contacts, &c. ...	607	843	906
Total	6,403	7,431	7,550
II.—DISPENSARY ATTENDANCES—			
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	3,944	4,026	3,793
(*b*) Attendances of "old" cases, including re-examination of contacts	22,203	23,331	23,777
(*c*) *Number of patients receiving Tuberculin	*2*	—	*1*
(*d*) *Number of attendances for Tuberculin	*31*	—	*8*
Total	26,147	27,357	27,570

* Numbers included in II (*a*) or (*b*).

	1923.	1924.	1925.
III.—X-Ray Examinations—			
(*a*) Number of examinations made at County Dispensaries	2,352	4,205	4,104
(*b*) Number of examinations made at Manchester	82	24	13
IV.—Artificial Light Treatment—			
Number of attendances at light centres :			
(*a*) At Lancaster and Ashton-under-Lyne County Dispensaries ...	—	—	2,074
(*b*) At Manchester and Salford Skin Hospital	—	—	1,703
V.—Number of Examinations of Sputum at County Dispensaries	5,586	6,490	6,130
VI.—Treatment Recommended—			
(1) Institutional (Sanatoria and Hospitals)	2,471	2,441	2,192
(2) Dispensary and Dispensary Supervision	17,711	17,302	17,684
(3) Provision of Surgical Appliances ...	144	119	142
(4) Loan of Shelters	30	32	12
(5) Diagnosis not confirmed—			
(*a*) Notified cases	233	159	221
(*b*) Non-notified cases	108	72	66
(6) Refused further treatment	46	50	27
(7) Pulmonary cases written off Register as cured	—	372	428
(8) Non-Pulmonary cases written off Register as cured	269	290	256
VII.—Number of Care Committees attended by—			
(*a*) Tuberculosis Officers	98	124	119
(*b*) Tuberculosis Health Visitors		136	137
VIII.—Number of Lectures and Addresses given on Tuberculosis	13	15	18
IX.—Number of Visits by Tuberculosis Officers to Sanatoria, Pulmonary and Special Hospitals	110	126	171
X.—Number of Special Visits by Tuberculosis Officers (*i.e.*, Interviews with Medical Officers of Health, General Hospital Officials, &c.)	†	110	113
XI.—Number of Visits paid by Dispensary Nurses	56,915	58,248	57,288

† Record not kept of visits.

Housing.

The following table shows the housing conditions of all patients who have applied to the County Council for treatment and who were under treatment or supervision at the end of 1925. Whilst every effort is made to secure that infectious cases occupy a separate room, or at least a

separate bed, no useful purpose is served by making the same insistence in regard to patients with the disease quiescent or arrested. The non-pulmonary cases are given separately, and only a very small number indeed may be considered infectious.

TABLE 10.—*Housing Statistics of County Patients.*

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	14	9	3
	15 and over ...	1,178	419	144
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	74	202	241
	15 and over ...	986	591	1,287
Total number of Non-Pulmonary cases.	Under 15 years	141	530	700
	15 and over ...	516	367	884
TOTAL ...	Under 15 years	229	741	944
	15 and over ...	2,680	1,377	2,315
				8,286

EXAMINATION OF HOUSE CONTACTS.

By the systematic examinations of house contacts*, particularly among those of patients with positive sputum, many early or unsuspected cases of tuberculosis are detected. Owing to indifference or unwillingness, considerable difficulty (which, however, is gradually being overcome) is experienced in persuading contacts to come to the dispensary for examination, or even to submit themselves for examination at all, and it, therefore, follows that the tuberculosis officer has to see a large proportion of them at their homes.

* A house contact has been defined as a person who has been staying in the home of a known living tuberculous case, or one who has lived in a house where a death from tuberculosis has occurred not more than six months from the date of examination.

TABLE 11.—*Contacts examined during* 1925.

	Diagnosed as Tuberculous.		Diagnosed as Suspects and kept under Observation.		Non-Tuberculous.	Total.	
	Pulmonary.	Non-pulmonary.	Pulmonary.	Non-pulmonary.			
First Examination at Home	5	4	49	22	358	438	1221
at Dispensary ...	24	13	132	20	594	783	
Re-examinations at Home	2	—	10	15	260	287	
at Dispensary ...	25	6	84	29	193	337	
Total	56	23	275	86	1405	1845	
	79		361				

Out of the 1,221 new contacts examined during the year, 79 were ultimately diagnosed as definite cases of tuberculosis—pulmonary 56 and non-pulmonary 23. These cases are equal to 64·7 per 1,000 of contacts examined, as against the proportion of 5·15 tuberculous persons per 1,000 of the population known to the dispensary staff in the County. Thus, the examination of contacts revealed many more tuberculous cases proportionately than would be found in the ordinary population.

It may be stated that of the 56 pulmonary cases, 48 per cent. were found with a positive sputum, so that there can be no doubt whatever of the diagnosis in these cases.

PROVISION OF BEDSTEADS, MATTRESSES, AND NURSING REQUISITES.

In each County dispensary area a small stock of bedsteads, mattresses (but not bedding), and nursing requisites belonging to the County Council is available for loan to necessitous patients undergoing home treatment. These articles were obtained principally with a view of securing the isolation of infective cases where, owing to the lack of bedsteads and the inability of relatives to provide them, such patients were compelled to sleep in beds with one or more persons.

The table following shows the number of these articles owned by the County Council, and also the number of patients who have been granted the use of the articles :—

Table 12.

Articles.	Quantity owned by County Council, 31/12/25.	Number of patients to whom articles have been loaned during 1925.	Articles in possession of patients on 31/12/25.
Bedsteads	185	78	151
Mattresses	180	83	156
Mattress Covers	133	31	108
Air Beds	3	9	3
Air Cushions	162	228	83
Air Pillows	1	7	...
Bath Chairs	4	1	3
Bed Pans	107	122	46
Bed Rests	59	77	28
Bed Slippers	76	30	10
Extension Apparatus ...	4	2	...
Ground Sheets	52	20	21
Hot Water Bottles, Rubber .	7	2	1
Ice Bags	2	1	...
Rest Chairs	2	1	2
Rubber Sheeting	18 yds.	1	...
Rubber Sheets	10	4	3
Spinal Boxes	17	8	3
Spinal Carriages	11	13	3
Urinals	117	50	40
Water Beds	15	34	4

The bedsteads, mattresses, &c., are held at the disposal of the consultant tuberculosis officers, and proper receipts are obtained from patients for articles loaned to them.

The action of the County Council in sanctioning the purchase of these articles has proved of valuable assistance in securing the better accommodation at home of persons with pulmonary tuberculosis considered to be infectious or contagious, especially in view of the present-day overcrowding which is general throughout the country, due to the house shortage.

X-ray Work.

X-ray installations for use by the tuberculosis officers for the examination of patients in order to assist in the diagnosis of doubtful and difficult cases of tuberculosis—both pulmonary and non-pulmonary forms—have been provided as follow by the County Council in each dispensary area, except Area 2, where a special arrangement exists :—

Area 1.—Lancaster (Chief) Dispensary.

Area 2.—Darwen (Branch) Dispensary (by arrangement with local Radiological Society).

Area 3.—Ashton-under-Lyne (Chief) Dispensary.

Area 4.—Eccles (Branch) Dispensary.

Area 5.—Seaforth (Chief) Dispensary and also at the Rufford Pulmonary Hospital for in-patients and occasional dispensary area cases. Plant installed at Rufford, May, 1926.

Furness.—High Carley Sanatorium, for the dispensary sub-area and sanatorium patients.

Fylde.—Elswick Sanatorium ; for the dispensary sub-area and sanatorium patients. Plant installed June, 1926.

In addition, arrangements exist with the Honorary Radiologists of the Manchester Royal Infirmary whereby occasional patients may be sent to their private surgery for X-ray examination.

The policy of placing an apparatus in each dispensary area for use by the tuberculosis officer himself is, from experience, found to be the best method, because the tuberculosis officer, with his knowledge of the patient's history and clinical signs, is most fitted to make a correct interpretation of the skiagrams. Cases are from time to time discovered by the tuberculosis officers which, but for the help afforded by X-ray examinations, would have been sent to an institution for the treatment of non-pulmonary tuberculosis. A few of such cases are alone sufficient to pay for the original cost of an X-ray apparatus. The various installations are also of use in the control of artificial pneumothorax treatment commenced during a patient's stay at a sanatorium or hospital.

The following X-ray work was done during 1925 : (*a*) at County dispensaries and High Carley Sanatorium, 3,238 skiagrams, 866 screen examinations ; and (*b*) at Manchester, 13 skiagrams ; making a total of 4,117 examinations. The totals for previous years were : 1924, 4,229 ; 1923, 2,434 ; 1922, 979 ; 1921, 879 ; and for 1920, 191.

A special chapter on the value of X-ray work together with photographs appears on pages 11 to 15.

Artificial Light Treatment.

A report on the work done at the experimental artificial light centres established during 1925 at the Lancaster and Ashton-under-Lyne dispensaries is given in a separate chapter (pages 18 to 20).

Examination of Sputum.

As an aid to diagnosis, arrangements are in existence for the examination, free of cost, of specimens of sputum sent by medical attendants. At each chief dispensary a small laboratory is installed for this work; whilst, in addition, an arrangement exists with the Director of the Public Health Laboratory, Manchester, for the examination of specimens.

The following statement shows the results of the examinations made in 1925, compared with the previous year :—

	At Dispensary Laboratories.		At Public Health Laboratory, Manchester.	
	1924.	**1925.**	1924.	**1925.**
Positive (*i.e.*, tubercle bacilli present) ...	1,469	1,289	374	300
Negative (*i.e.*, tubercle bacilli not found).	5,021	4,841	500	483
Total	6,490	6,130	874	783

Provision of Special Nourishment.

The provision of special nourishment is, in suitable cases, of great value to a patient in helping him to recover from the disease. A large proportion of cases have been allowed special nourishment pending removal to an institution, and these grants have undoubtedly enabled patients to commence their institutional treatment in a more favourable state than they would have been without it. The effect may, on the whole, be said to have shortened the period of institutional treatment for many patients.

During the year, 1,479 grants of special nourishment (subject to certain conditions, published in the 1924 report) for varying periods were made to 733 individual patients—representing a small increase on last year.

Tuberculin.

Tuberculin treatment was given during the year to two patients. One patient received treatment at home and the other made eight dispensary attendances.

Special Surgical Appliances.

During 1925 the following surgical appliances were supplied to patients, on the recommendation of the tuberculosis officers :—

Abduction splint, 2; angular splint, 1; ankle splint, 2; back splint, 3; caliper splint, 13; elbow splint, 4; modified splint, 1;

Thomas' hip splint, 17 ; Thomas' bed splint, 1 ; Thomas' knee splint, 1 ; wrist splint, 1 ; Bradford frame, 4 ; spinal frame, 5 ; Thomas' frame with headpiece, 8 ; spinal support, 20 ; posterior spinal support, 1 ; knee support, 1 ; webbing support, 1 ; spinal jacket, 4 ; spinal brace, 1 ; spinal corsets, 2 ; abdominal belt, 2 ; double truss, 3 ; crutches, 20 pairs ; pattens, 11 ; surgical boot, 13 ; artificial limb, 5 ; De Vilbis throat spray, 1 ; leather collar and cuff, 1.

Sleeping Shelters.

The number of shelters purchased by the Lancashire County Council is 81. Some of these have been transferred to institutions, and there are now 54 in use by patients at their homes. I have to thank medical officers of health and sanitary inspectors throughout the County for much valuable help in connection with the removal, disinfection, and re-erection of shelters used by County patients.

The loan of sleeping shelters is made to suitable cases on the recommendation of the tuberculosis officer, after careful consideration of the following points : (1) the condition of the patient and his ability to use the shelter properly ; (2) the position of the shelter ; (3) the home conditions of the patient ; and (4) the means of communication with the nearest inhabited building in case of a sudden relapse.

The number of persons in 1925 who were allowed the use of the shelters was 64.

Doubtful Cases of Tuberculosis.

A number of cases are referred to the tuberculosis officers by medical attendants, sanitary officials, Pensions authorities, &c., where the diagnosis of tuberculosis is doubtful. These cases are kept under supervision for a short time, and, if necessary, sent to a residential institution for a period of observation until the diagnosis of tuberculosis can be definitely settled one way or the other.

REPORTS FROM DISPENSARY AREAS.

In this chapter there is given in respect of each dispensary area a summary of the work done by the dispensary staff, the housing conditions of patients, and a report of the consultant tuberculosis officer.

Area No. 1.

Lancaster, Chorley, Preston Rural, and Lytham St. Annes Districts.

(Estimated population, 246,641.)

Consultant Tuberculosis Officer ... ... Dr. A. D. Brunwin.
Assistant Tuberculosis Officer ... ... Dr. G. H. Leigh.

Number of tuberculous cases under supervision on 31st December, 1925 (Definitely tuberculous, 1336 ; doubtful, 49.)	1385
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	299
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	1165
(2) For other purposes, i.e., admissions to institutions, after discharge from institutions, re-examination of contacts, &c.	95
Total	1559

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Lancaster (Chief), 8, Middle Street. [Opened January, 1915]	108	590
Chorley (Branch), 59, Gillibrand Street. [Opened 22nd June, 1914, at 5, High Street, and removed to 59, Gillibrand Street, 1st September, 1925]	148	616
Preston (Branch), 22, Bolton Street. [Opened July, 1917]	70	336
Total	326	1542

Number of attendances of patients at the Lancaster Dispensary for artificial light treatment	351
Number of care committees attended by—	
(*a*) Tuberculosis officers	22
(*b*) Tuberculosis health visitors	31
Number of lectures or addresses given	1
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals	36
Number of special visits by tuberculosis officers (*i.e.*, interviews with medical officers of health, general hospital officials, &c.)	2
Total number of nurses' visits to cases—	
(*a*) New cases 333	5924
(*b*) Old cases 5591	
Number of sanitary defects reported to the local medical officers of health ...	8
Number of sanitary defects which after notification were remedied	4
Number of disinfections carried out by sanitary authorities	269
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment ...	449

Housing Statistics of Patients (applicants) in Area No. 1.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	3	2	—
	15 and over ...	172	24	13
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	5	18	35
	15 and over ...	118	33	161
Total number of Non-Pulmonary cases.	Under 15 years	18	37	95
	15 and over ...	75	21	88
TOTAL		391	135	392

Dr. Brunwin sends the following report on work done in this area :—

Treatment by artificial light was commenced on July 15th at the Lancaster Dispensary. A small carbon arc lamp has been installed (the Alpine Sun pattern) which does not require a transformer, together with a mercury vapour lamp. Surgical tuberculosis in various forms has been treated, most of the patients coming from the Lancaster district. The results have been very satisfactory. Certain cases have been treated instead of being sent to institutions, and lupus and gland cases that would have been sent to Manchester for X-ray and other treatment have been dealt with, so that a good deal of expense has been saved in these directions.

AREA NO. 2.

Accrington, Bacup, Burnley Rural, Darwen, Nelson, and Rawtenstall Districts.

(Estimated population, 359,226.)

Consultant Tuberculosis Officer ... Dr. B. MACPHEE.

Assistant Tuberculosis Officer ... Dr. S. C. ADAM.

Number of tuberculous cases under supervision on 31st December, 1925 (Definitely tuberculous, 1162 ; doubtful, 123.)	1285
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	288
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	353
(2) For other purposes, i.e., admissions to institutions, after discharge from institutions, re-examination of contacts, &e.	94
Total	735

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Accrington (Chief), 39, Avenue Parade. [Opened April, 1915]	258	808
Darwen (Branch), 20, Railway Road. [Opened 19th May, 1916]	92	249
Nelson (Branch), 64, Carr Road. [Opened January, 1915]	252	434
Stacksteads (Branch), Knott Hill House. [Opened 18th May, 1916]	112	431
Total	714	1972

Number of care committees attended by tuberculosis health visitors ...		3
Number of lectures or addresses given		6
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals		26
Number of special visits by tuberculosis officers (i.e., interviews with medical officers of health, general hospital officials, &c.)		29
Total number of nurses' visits to cases—		
(*a*) New cases	396	9986
(*b*) Old cases	9590	
Number of sanitary defects reported to the local medical officers of health ...		67
Number of sanitary defects which after notification were remedied		44
Number of disinfections carried out by sanitary authorities— Rooms 512, Articles 990		1502
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment ...		775

Housing Statistics of Patients (applicants) in Area No. 2.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	—	—	—
	15 and over ...	247	89	27
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	4	8	6
	15 and over ...	113	47	116
Total number of Non-Pulmonary cases.	Under 15 years	9	54	56
	15 and over ...	99	67	115
TOTAL		472	265	320

Dr. MacPhee reports :—

The X-ray work for Area No. 2 is carried out at the Dispensary, 20, Railway Road, Darwen, and during the year 444 skiagrams were taken.

Examinations of sputum are carried out at the laboratory at the Accrington Chief Dispensary. During the year 1,299 specimens were examined with the following results: Positive 263, negative 1,036.

Periodical visits have been paid by myself or Dr. Adam to the Bull Hill and Burnley Pulmonary Hospitals, in order to confer with the medical superintendent as to the treatment of County patients resident there. Four quarterly visits were made to Barrowmore Hall Sanatorium.

As in former years, monthly visits were paid to the Moorlands Infirmary, Rawtenstall, and, in consultation with the medical superintendent, all cases of tuberculosis and those with suspicious symptoms were examined and an opinion given. During the year 25 new cases were examined for diagnosis. Of that number one was found to be suffering from pulmonary tuberculosis, and one from non-pulmonary tuberculosis. In addition, other tuberculous cases and suspects were kept under observation during the year.

The Care Committee in the Bacup and Rawtenstall area and that in the Bromley Cross district of Turton have functioned as usual.

The County Care scheme has again been of excellent service in assisting neccssitous patients in those districts which do not possess a voluntary care committee.

Area No. 3.

Ashton-under-Lyne, Bury Rural, Chadderton, Crompton, Littleborough, Middleton, Mossley, &c., Districts.

(Estimated population, 374,031.)

Consultant Tuberculosis Officer ... Dr. J. L. Stewart.

Assistant Tuberculosis Officers ... Dr. G. Fletcher and Dr. C. Berry.

Number of tuberculous cases under supervision on 31st December, 1925 (Definitely tubercnlous, 1892; doubtful, 11.)	1903
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	220
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	245
(2) For other purposes, i.e., admissions to institutions, after discharge from institutions, re-examination of contacts, &e.	183
Total	648

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Ashton-under-Lyne (Chief), Boston House, Warrington Street. [Opened September, 1914]	421	2496
Bury (Branch), The Wylde. [Opened November, 1914]	249	1218
Middleton (Branch), 71, Manchester Old Road. [Opened 19th May, 1915]	86	395
Mossley (Branch), Park Lodge. [Opened November, 1914]	19	224
Oldham (Branch), 25, Barker Street. [Opened 15th February, 1915]	300	1385
Rochdale (Branch), 168, Drake Street. [Opened at 134, Drake Street, in March, 1915 and removed to 168, Drake Street on 9th May, 1924]	62	369
Total	1137	6087

Number of attendances of patients at the Ashton Dispensary for artificial light treatment		1723
Number of care committees attended by—		
(*a*) Tuberculosis officers		9
(*b*) Tuberculosis health visitors		10
Number of lectures or addresses given		5
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals		62
Number of special visits by tuberculosis officers (i.e., interviews with medical officers of health, general hospital officials, &c.)		13
Total number of nurses' visits to cases—		
(*a*) New cases	617	11946
(*b*) Old cases	11329	

Housing Statistics of Patients (applicants) in Area No. 3.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	—	1	—
	15 and over ...	232	136	38
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	10	40	49
	15 and over ...	194	173	267
Total number of Non-Pulmonary cases.	Under 15 years	18	114	153
	15 and over ...	86	97	246
TOTAL		540	561	753

Number of sanitary defects reported to the local medical officers of health ...	153
Number of sanitary defects which after notification were remedied	59
Number of disinfections carried out by sanitary authorities	489
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment ...	806

Dr. Stewart reports :—

The Care Committee for Ashton-under-Lyne and district has completed a ninth year's work, and during the twelve months 72 cases were assisted by the Committee in various ways, the total expenditure amounting to £284 9s. 3d. The carbon arc lamp which the Committee presented to the County Council for use at the dispensary has been in operation and has been of great assistance in the treatment of various forms of tuberculosis. The Committee in July, 1926, presented a second lamp—the Kromayer quartz type —for use at the dispensary.

The bacteriological work for the area is carried out at the laboratory of the chief dispensary at Ashton-under-Lyne. During the year, 1,393 specimens of sputum and sixty-three specimens of urine were examined with the following results :— Sputum, positive 359, negative 1,034; urine, positive 12, negative 51. These figures include re-examinations.

The X-ray work for the area has also been done at the chief dispensary. During the year, 1,505 skiagrams were taken.

Visits for the purpose of conferring with the medical superintendents as to County patients in residence have been made each month to the following pulmonary hospitals and sanatorium: Wolstenholme Hall, Norden ; Marland, Rochdale ; Westhulme, Oldham ; Aitken Sanatorium, Holcombe Brook. The Liverpool Open-Air Hospital for Children, Leasowe, was visited every quarter.

During the year, 35 patients were discharged from Bury Observation Hospital, and the results on discharge are analysed as follows : diagnosis not confirmed 16, diagnosis confirmed and transferred to dispensary supervision 17, diagnosis confirmed and transferred to sanatorium 1, removed by parents after one day's observation 1. Of the cases where a diagnosis of tuberculosis was made 11 were pulmonary and 7 non-pulmonary. The age of the patients varied from 2 to 13 years, and the average period of residence was two and a half months.

Artificial light treatment was commenced at the dispensary in September, 1925. The installation consists of two Eidinow long flame carbon arc lamps, and one atmospheric mercury vapour lamp, and later one Kromayer quartz mercury vapour

lamp. On the 31st December, 1925, 74 patients were under treatment. The results have been very satisfactory, and the provision of this new form of treatment has been abundantly justified. The light department was inspected by Dr. F. J. H. Coutts, C.B., a senior medical officer in charge of the Tuberculosis Section of the Ministry of Health, in December, 1925.

Area No. 4.

Leigh, Eccles, Farnworth, Stretford, Swinton, and Wigan Rural Districts.

(Estimated population, 458,134.)

Consultant Tuberculosis Officer ... Dr. G. Jessel

Assistant Tuberculosis Officers ... Dr. G. B. Charnock
Dr. A. B. Jamieson
Dr. J. Cathcart

Number of tuberculous cases under supervision on 31st December, 1925 (Definitely tuberculous, 2678 ; doubtful, 12.)	2690
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	620
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	1854
(2) For other purposes, i.e., admissions to institutions, after discharge from institutions, re-examination of contacts, &c.	356
Total	2830

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Leigh (Chief), 13, Church Street. [Opened November, 1914]	210	2404
Eccles (Branch), 28 and 30, Gilda Brook Road. [Opened 4th August, 1915]	129	886
Farnworth (Branch), 19–23, Darley Street. [Opened at 12, Bolton Road in January, 1917 ; removed to 19–23, Darley Street on 5th November, 1924]	159	1368
Pendlebury (Branch), 121, Station Road. [Opened at 40, Chorley Road, Swinton, in October, 1914 ; removed to 121, Station Road, Pendlebury, 30th May, 1924] ...	103	1186
Stretford (Branch), 14, Derbyshire Lane. [Opened at 14, Dorset Street, in November, 1916, removed to 14, Derbyshire Lane, 12th March, 1926]	147	841
Wigan (Branch), 14, Rodney Street. [Opened 26th November, 1913]	207	1304
Total	955	7989

Number of eare eommittees attended by—		
(*a*) Tuberculosis offieers		71
(*b*) Tuberculosis health visitors		71
Number of lectures or addresses given		4
Number of visits by tubereulosis offieers to sanatoria, pulmonary and speeial hospitals		18
Number of speeial visits by tuberculosis offieers (i.e., interviews with medieal offieers of health, general hospital offieials, &e.)		22
Total number of nurses' visits to eases—		
(*a*) New eases	853	18134
(*b*) Old eases	17281	
Number of sanitary defeets reported to the loeal medical offieers of health ...		80
Number of sanitary defeets whieh after notifieation were remedied		75
Number of disinfeetions carried out by sanitary authorities		587
Number of eases referred by medieal praetitioners, Pensions authorities, &e., to tubereulosis offieer for an opinion as to diagnosis or treatment ...		756

Housing Statistics of Patients (applicants) in Area No. 4.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary eases *considered infectious or contagious.*	Under 15 years	5	3	2
	15 and over ...	328	119	17
Total number of Pulmonary eases *not* considered infeetious or eontagious.	Under 15 years	19	39	33
	15 and over ...	303	198	373
Total number of Non-Pulmonary eases.	Under 15 years	56	163	202
	15 and over ...	167	128	290
TOTAL		878	650	917

Dr. Jessel reports :—

1.—The total number of cases under supervision at the end of the year was 2,690, as compared with 2,684 at the end of 1924.

The elose co-operation between the dispensary and other organisations working for the prevention and treatment of the disease (privatc medical practitioners, medical officers of health, Pensions authorities, etc.) has been maintained. Close co-operation has been effected with the Poor-law medical service as the result of my appointment as visiting consultant tuberculosis officer to the Townleys Hospital, in the Bolton Union, and to the Green Lane Hospital, Patricroft, in the Barton-upon-Irwell Union.

The number of new cases specially referred to me previous to notification being received was 756. In addition, 329 new notified cases who had actually applied for treatment, and 13 who had not so applied were examined for the first time after notification. For some time past special efforts have been made to encourage more prompt notification, and to ensure that particulars of notifications are received at the earliest possible moment. As soon as particulars of notification are received (which, as the result of an informal arrangement with the medical officers of health, is usually before or simultaneous with their arrival at the County health department), the patient is visited by one of the dispensary nurses and arrangements made for immediate examination.

2.—*Sputum Examinations.*—The whole of the sputum examinations for the area were undertaken at the laboratory at the Eccles dispensary, and during the year 2,706 specimens were examined, of which 492 were positive and 2,214 negative. Out of the 2,706 specimens examined 261 were done at the request of medical practitioners, of which 40 specimens (relating to 37 individual patients) were positive.

3.—*X-ray Work.*—During the year 1 patient was screened, and 374 skiagrams taken. It has been the practice to use the X-ray apparatus for selected cases where special assistance might reasonably be anticipated, in order to supplement the other methods of examination or to confirm the findings of clinical examination.

4.—*Care Work.*—The Care Committees of Leigh, Wigan, Farnworth, and Westhoughton, together with the tuberculosis sections of the Eccles and Stretford Guilds of Help have continued to do excellent work. These voluntary bodies have assisted 296 patients during the year at the cost of about £612. About three-quarters of the population of the area and nearly all the urban population is covered by the activities of the care committees. Under the scheme whereby, in places where there is no care committee, tuberculosis officers have been authorised to assist patients directly out of the special County Care Fund, 12 patients have been helped at a cost of nearly £29.

5.—*Isolation.*—As in former years, special attention has been paid to infectious pulmonary cases at home, and much credit is due to the eight tuberculosis health visitors for the results which have attended their efforts. The reports of the health visitors are regularly and carefully considered, and they are taken into consideration when patients are medically examined. In this way it has been possible to make a selection of cases suitable for

institutional treatment, having regard not only to their medical condition but also to their home conditions. The net result has been that very few infectious cases in the area remain for long at home, if their circumstances are such that they cannot remain there without being a danger to the other members of the household. The presence of the Peel Hall Hospital in the area has undoubtedly been of great advantage from this point of view.

6.—*Home Visiting.*—This is regarded as of the utmost importance, as it is only by actual visits paid by the tuberculosis officers and dispensary nurses that a clear idea of the environmental and home circumstances of the patients can be obtained, and such improvements and modifications as are indicated to further the patients' treatment, or to prevent the spread of infection, are usually only obtained at the cost of frequently repeated visits. Care has been taken not to pay unnecessary visits. The cases that have been visited most frequently are those with active infectious disease or non-pulmonary cases requiring dressing or special attention.

7.—*Contacts.*—During 1925, 832 examinations of contacts were made, out of which 22 definite cases were found.

8.—*Non-pulmonary Cases (including Orthopædic Cases).*—During the course of the year 3,756 dressings were performed by the eight tuberculosis health visitors, 2,362 being done at the dispensaries and 1,494 at the homes of patients. At the end of the year 72 patients were regularly being dressed by the health visitors. Many cases of glands of neck were aspirated by the tuberculosis officers, and in a number of cases plasters were applied in suitable cases of joint tuberculosis. In several other cases extension apparatus have been lent from the dispensary, in the application of which the dispensary staff have co-operated with the medical attendant.

9.—*Changes in Area.*—On the 1st January, 1926, the several sanitary districts served by the Wigan dispensary, were, for administrative convenience, transferred to the neighbouring dispensary area 5.

Area No. 5.

Seaforth, Newton-in-Makerfield, Warrington Rural, West Lancashire Rural, Whiston Rural, and Widnes Districts.

(Estimated population, 252,586.)

Consultant Tuberculosis Officer ... Dr. C. W. Laird.
Assistant Tuberculosis Officer ... Dr. C. H. Lilley.

Number of tuberculous cases under supervision on 31st December, 1925 (Definitely tuberculous, 1459 ; doubtful, 18.) ...	1477

Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	235
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	587
(2) For other purposes, i.e., admissions to institutions, after discharge from institutions, re-examination of contacts, &c.	113
Total	935

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Scaforth (Chief), 7, Claremont Road. [Opened February, 1915]	234	1852
St. Helens (Branch), 18, Claughton Street. [Opened 21st March, 1922]	123	511
Widnes (Branch), Brendan House. [Opened 20th July, 1914]	183	2508
Total	540	4871

Number of care committees attended by—		
(*a*) Tuberculosis officers		17
(*b*) Tuberculosis health visitors		22
Number of lectures or addresses given		2
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals		17

Housing Statistics of Patients (applicants) in Area No. 5.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	3	3	1
	15 and over ...	138	45	38
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	11	52	82
	15 and over ...	144	98	229
Total number of Non-Pulmonary cases.	Under 15 years	28	122	166
	15 and over ...	55	34	111
TOTAL		379	354	627

Number of special visits by tuberculosis officers (*i.e.*, interviews with medical officers of health, general hospital officials, &c.)		46
Total number of nurses' visits to cases—		
(*a*) New cases	441	6147
(*b*) Old cases	5706	
Number of sanitary defects reported to the local medical officers of health ...		123
Number of sanitary defects which after notification were remedied		65
Number of disinfections carried out by sanitary authorities		439
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment ...		516

Dr. Laird reports :—

During 1925 there was little alteration in the routine work carried out by the dispensary organisation.

The increasing usefulness of the X-ray apparatus has been made manifest from time to time.

Artificial pneumothorax refills have been continued, supplemented by X-ray control, and many cases have been written off the books as quiescent, or rejected as not being tuberculous very largely after X-ray examination.

The four care committees in the area have shown no falling off in enthusiasm or salutary services.

Co-operation on the part of private practitioners, medical officers of health, and school medical officials has been maintained.

Monthly visits were paid to Hefferston Grange and Eccleston Hall in connection with the treatment of County patients at those institutions.

For the first time in this area the films acquired by the Tuberculosis Committee were exhibited in connection with a lecture given by me in Waterloo Town Hall at the request of the local medical officer of health.

Furness Sub-Area.

Dalton-in-Furness, Grange-over-Sands, Ulverston, and Ulverston Rural Districts.

(Estimated population, 41,230.)

Consultant Tuberculosis Officer ... Dr. E. H. Allon Pask.

Number of tuberculous cases under supervision on 31st December, 1925 (Definitely tuberculous, 351 ; doubtful, 33.)	384
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion, including new contacts	63
(*b*) Revisits—	
(1) Respecting continued home treatment and dispensary supervision	159
(2) For other purposes, i.e., admissions to institutions, after discharge from institutions, re-examination of contacts, &c.	7
Total	229

Dispensary Attendances—	New persons examined, including new contacts.	Attendances of old cases and contacts.
Ulverston (Branch), Virginia House. [Opened 14th October, 1915]	106	1225

Total number of nurses' visits to cases—		
(*a*) New cases	109	3295
(*b*) Old cases	3186	
Number of visits by tuberculosis officers to sanatoria, pulmonary and special hospitals		12
Number of sanitary defects reported to the local medical officers of health ...		7
Number of sanitary defects which after notification were remedied		7
Number of disinfections carried out by sanitary authorities		80
Number of cases referred by medical practitioners, Pensions authorities, &c., to tuberculosis officer for an opinion as to diagnosis or treatment ...		111

Housing Statistics of Patients (applicants) in Furness Sub-Area.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	3	—	—
	15 and over ...	26	2	6
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	16	35	29
	15 and over ...	69	17	93
Total number of Non-Pulmonary cases.	Under 15 years	4	11	6
	15 and over ...	19	8	11
TOTAL		137	73	145

Dr. Pask sends the following report on the work done in this sub-area :—

The number of cases notified in the sub-area was 91, as compared with 108 in 1924.

The number of sputum examinations made at the High Carley Sanatorium for dispensary patients was 118.

The X-ray examinations of dispensary patients numbered 205, as against 164 in 1924.

The number of cases assisted through the County care scheme during the year was 18, and the amount expended was £36 16s. 0d.

Fylde Sub-Area.

Fleetwood, Fylde Rural, Garstang Rural (part of), Kirkham, Poulton-le-Fylde, Preesall, and Thornton Districts.

(Estimated population, 53,652.)

Consultant Tuberculosis Officer ... Dr. G. Leggat.

Number of tubereulous eases under supervision on 31st Deeember, 1925 (Definitely tubereulous, 314 ; doubtful, 16.)	330
Visits to patients at their Homes—	
(*a*) Number of new persons examined for diagnosis or expert opinion ineluding new eontacts	159
(*b*) Revisits—	
(1) Respeeting eontinued home treatment and dispensary supervision	397
(2) For other purposes, i.e., admissions to institutions, after diseharge from institutions, re-examination of eontacts, &e.	58
Total	614

Dispensary Attendanees—	New persons examined, ineluding new eontaets.	Attendances of old eases and eontaets.	
Fleetwood (Branch), 23, Poulton Road. [Opened 10th Novcmber, 1925]	15	91	
Total number of nurses' visits to eases—			
(*a*) New eases		117	1856
(*b*) Old cases		1739	
Number of speeial visits by tubereulosis officer (i.e., interviews with medical officers of health, general hospital officials, &e.)			1
Number of sanitary defeets reported to the loeal medieal officers of health ...			18
Number of sanitary defects whieh after notification were remedied			15
Number of disinfeetions earried out by sanitary authorities			74
Number of eases referred by medieal praetitioners, Pensions authorities, &e., to tuberculosis offieer for an opinion as to diagnosis or treatment ...			118

Housing Statistics of Patients (applicants) in Fylde Sub-Area.

		Patients Occupying Separate Bedroom.	Patients Occupying Separate Bed, but not Separate Bedroom.	Not Separate Bed.
Total number of Pulmonary cases *considered infectious or contagious.*	Under 15 years	—	—	—
	15 and over ...	35	4	5
Total number of Pulmonary cases *not* considered infectious or contagious.	Under 15 years	9	10	7
	15 and over ...	45	25	48
Total number of Non-Pulmonary cases.	Under 15 years	8	29	22
	15 and over ...	15	12	23
TOTAL		112	80	105

Dr. Leggat reports :—

The opening of the dispensary at Fleetwood has supplied a long-felt want, and has greatly facilitated the examination of doubtful and contact cases. In addition to the town of Fleetwood, cases from the following areas attend the dispensary :— Knott End, Preesall, Thornton, Cleveleys, and occasionally Kirkham and Poulton.

So far there has been no difficulty in getting patients to attend at the dispensary, and the medical practitioners have taken ample opportunity to refer cases for an opinion. As in previous years, the dispensary work has been carried out in close co-operation with the medical practitioners, school medical officers, and medical officers of health.

COUNTY SANATORIA AND HOSPITALS.

(1) High Carley Sanatorium, near Ulverston.

Medical Superintendent :
E. H. Allon Pask, M.D. (Lond.), L.R.C.P. (Lond.), M.R.C.S. (Eng.).

Assistant Medical Superintendent :
Henry J. Villiers, L.R.C.P.I., L.R.C.S.I.

Matron : Miss E. Woosey.

High Carley Sanatorium is situated about three miles west of Ulverston, to the south of the main road to Barrow-in-Furness. The buildings stand in about 23 acres of ground, and accommodation at the end of the year was provided for 112 patients (62 males and 50 females). During the summer months eight additional beds are made available temporarily for female patients.

The medical superintendent and the assistant are accommodated on the estate ; and seven houses are provided in the vicinity of the sanatorium for the male employees.

Particular attention is paid to the employment of suitable cases on some purposeful and constructive work in order chiefly to occupy the minds of the patients and bring about improved bodily health. An army hut is equipped as a workshop, and provides means for training in woodwork, boot repairing, and hurdle making. The patients also have facilities for recreation. An X-ray apparatus is installed.

An agreement exists between the County Council and the Barrow-in-Furness Corporation for the reservation at High Carley of a number of beds, not exceeding 16, for Borough patients. These beds when not required are filled by County patients, in accordance with arrangements with the Corporation.

During the year, 161 County patients received some form of dental treatment from the visiting dentist (Mr. Miller, L.D.S.).

The following table shows the condition of patients discharged (excluding deaths) during the years 1924 and 1925 :—

Condition on Discharge of 473 persons who received treatment in High Carley Sanatorium during 1924 and 1925.

† Stage of Disease on Admission.	Total number Discharged.	Average Duration of Treatment in Months.	Condition on Discharge.				
			Quiescent.	Improved.	Stationary.	Worse.	* No Information.
			%	%	%	%	%
Stage I. & I.S—							
Males	147	4·5	33·3	39·4	4·8	3·4	19·0
Females ...	102	5·4	44·1	31·4	5·9	3·9	14·7
Total ...	249	...	37·7	36·1	5·2	3·6	17·3
Stage II. & II.S—							
Males	138	5·1	12·3	41·3	5·1	12·3	28·9
Females ...	72	7·8	18·0	41·7	12·5	6·9	20·8
Total ...	210	...	14·3	41·4	7·6	10·5	26·2
Stage III. & III.S—							
Males	7	4·5	...	57·1	...	28·6	14·3
Females ...	7	5·2	14·3	...	42·8	28·6	14·3
Total ...	14	...	7·1	28·6	21·4	28·6	14·3

* Includes patients discharged for other than medical reasons.

† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms, as suggested by Philip.

Dr. Pask reports as follows on matters relating to the treatment of the patients and the administration of the sanatorium :—

The treatment of the patients has been carried out on the usual lines during 1925, viz., fresh air, and adequate supply of nourishing food, systematic rest, and graduated work and exercise. During the brief spells of fine weather in the summer natural sunlight treatment was tried in a modified form and the results have been beneficial.

As in previous years, a speeial effort was made to encourage patients who were physically fit to undertake graduated work ; as far as possible patients are given work to do for which they have a speeial inelination, and the various tasks prescribed inelude earpentry and woodwork, hurdle making, boot repairing, wicker-chair repairing, basket-making, painting, and various forms of gardening. Graduated labour, in my opinion, forms a very important part of sanatorium treatment, for, in addition to having a definite medical value in increasing the resistance to to the disease, it has a benefieial moral effect on the patient, making him mueh more contented than if he had no definite task to perform. A patient who has nothing to do exeept brood

on his condition is of necessity dissatisfied, as for example those who have complaints to make are patients who do not respond to sanatorium treatment, and have unfortunately to remain in bed without any purposeful occupation. The type of work most popular among patients is that which involves construction, *e.g.*, carpentry and hurdle making, rather than gardening.

The poultry farm is managed entirely by the female patients and provides interesting occupation for four women; it also has the advantage of ensuring a regular supply of fresh eggs and chickens when in season, which produce is a valuable asset for the sanatorium.

As regards special forms of treatment, artificial pneumothorax has been continued with beneficial results in selected cases, and my experience has been that it is the only special form of treatment which does definite good. An extensive trial was given to the so-called Newell treatment, and eight patients were put on a complete course, but in none of them was there any lasting benefit. One patient (a man) whose temperature was very unsteady for some weeks, after the initial dose returned a normal temperature for two or three days, but on investigation it was discovered that the readings were fictitious as he was tired of bed and wanted to get up. This incident is mentioned as it serves to impress on the superintendent of a sanatorium the necessity of careful observation when any special treatment is being tried.

At present no form of artificial light treatment has been tried, but I understand it has been employed at various sanatoria with good results. Its value in non-pulmonary cases has been proved beyond doubt, and I see no reason why it should not benefit selected pulmonary cases. An installation would, I think, be useful.

The dental treatment has been continued, the dental surgeon visiting weekly. This is undoubtedly a most important adjunct to treatment.

The recreation of the patients has been well catered for—in addition to the usual indoor amusements, wireless, billiards and card games have been arranged, and during the winter months a weekly cinematograph entertainment has been provided in the men's recreation room. In addition to using the cinema as a form of entertainment, several films of an educational nature were shown in order to stimulate the interest of the patients in their treatment ; one illustrating the life of a patient at High Carley Sanatorium proved very popular, and other films on similar lines were also exhibited. The High Carley film has also been exhibited at several of the local cinemas, and very favourable reports have been received as to its reception.

As usual we have received numerous visits from concert parties in the neighbourhood which have been thoroughly enjoyed, and our thanks are due to all for generously giving their services to amuse patients and staff.

In summer time, bowls, croquet, and clock golf were indulged in.

The sanatorium library continues to be increasingly popular with the patients. During the year about 7,000 books were loaned out. In addition to the books supplied by the Committee, we continue to receive a generous supply of periodicals from friends interested in the institution. Lectures are given at intervals to the patients, and at the end questions are invited. These are useful in explaining the rationale of sanatorium treatment, and encourage patients to take the necessary personal interest in their treatment.

Probationer nurses come to the institution for a course of two years' training, which includes practical demonstrations and lectures by the matron and myself. Two examinations are held and those showing the necessary proficiency are given a certificate at the end of their training. During 1925, Nurses Stock and Kennedy gained these certificates.

The X-ray apparatus has been more extensively employed during the year, the number of cases increasing as follows :— Skiagrams 102, as compared with 82 in 1924 ; Screen examinations 108, as compared with 78 in 1924.

It has proved most useful (*a*) in assisting diagnosis (cases of aneurism and new growths which were thought to be tubercular were excluded after X-ray examination), and (*b*) in controlling artificial pneumothorax treatment.

An investigation was made of the sputum of 117 cases with a positive sputum on admission, who were discharged during the year. Of these 117 cases, 13 were discharged with a negative sputum and 2 with no sputum at all, the bacillary loss being 12·82 per cent.

An investigation was carried out of patients discharged during the year who had completed two months treatment or more, as to the amount of weight gained, and the figures are as follow :—

137 male patients—average gain in weight 10 lbs. 8 oz.
82 female patients—average gain in weight 18 lbs. 14 oz.

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219 males and females—average gain in weight 13 lbs. 10 oz.

These figures are peculiar in that the average gain in weight of the female patients was considerably in excess of the male patients, *i.e.*, 8 lbs. 6 oz.

The garden has been considerably extended during the year, and the produce grown was proportionately increased. For the first time since the institution was opened (ten years ago) we have been self-supporting as regards garden produce. This is a great advantage, as it ensures a constant supply of fresh vegetables, and undoubtedly helps in the treatment as the vitamin content of the food is kept up to a high level.

The grounds in front of the men's end have been improved by laying a large lawn for clock golf.

During the year 1,400 specimens of sputum were examined for tubercle bacilli with the following results :—Positive 816, negative 584.

(2) Oubas House Children's Sanatorium, Ulverston.

Medical Superintendent : E. H. Allon Pask, M.D.

Assistant Medical Superintendent : Dr. H. J. Villiers.

Matron : Miss E. Wooscy. *Sister-in-Charge :* Miss S. Braithwaite.

In May, 1920, the County Council came to terms with Miss Keswick, the lessor, to accept an assignment, for the residue of a term of 21 years (dating from November, 1912), of the premises known as Oubas House, Ulverston, until then used by Miss Keswiek as a hospital for children.

The house stands in its own grounds (about one acre in extent), and accommodation was at first provided for 18 children and later increased to 21. A portion of an army hut has been adapted for use as a classroom. Educational instruction is given to the children in conformity with the requirements of the Board of Education.

This sanatorium is administered in conjunction with the High Carley Sanatorium, the nursing staff at Oubas House consisting of a sister-in-charge, two probationer nurses (one of whom acts as night-nurse), and also one certificated teacher.

For the period 2nd August, 1921, to 31st December, 1925, 129 patients (girls) were treated and discharged, their condition being as follows :—

† Stage of Disease on Admission.	Total number Discharged (Females).	Average Duration of Treatment in Months.	Condition on Discharge.				
			Quiescent.	Improved.	Stationary.	Worse.	* No Information.
			%	%	%	%	%
Stage I. & I.S	97	7·3	62·9	34·0	...	...	3·1
Stage II. & II.S	29	8·4	48·3	34·5	6·9	10·3	...
Stage III. & III.S	3	6·2	33·3	66·7	...	...	...

* Includes patients discharged for other than medical reasons.

† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms, as suggested by Philip.

Dr. Pask reports as follows on matters relating to the treatment of patients, and the administration of the sanatorium :—

The children at Oubas House responded to treatment very satisfaetorily during the year. In the summer months heliotherapy (natural sunlight) was earried out in all eases exeept febrile ones, or unless there was some eontra-indieation. The results of the treatment were most satisfaetory, the appetite of the ehildren was improved and their sense of well-being inereased, the teacher also informed me that she found that under the treatment the ehildren were mueh brighter in school.

The educational facilities provided are very helpful, and apart from giving instruction in elementary subjeets, so that they can keep up with their sehooling, the teacher is able to interest them and so keep them eheerful and oceupied.

Lady Fell and Mrs. Hutehinson have continued to pay their usual visits to the institution and their presenee is gladly welcomed by patients and staff.

During the year the ehildren were again instrumental in making raffia artieles whieh were sent to the various health week exhibitions.

During the year, 105 speeimens of sputum were examined with the following results :—Positive 21, negative 84.

(3) Elswick Sanatorium, near Kirkham.

Medical Superintendent :
George Leggat, M.B., Ch.B., D.P.H. (Aberdeen).

Matron : Miss I. G. Barclay.

This sanatorium is situated on the east side of Elswick Village, and is about six miles from Kirkham Station. The buildings and about 11 acres of land belong to the Fylde, Preston, and Garstang Joint Smallpox Hospital Board, and were taken on lease by the Lancashire County Council in 1913 for a period of 21 years. The Council are under an obligation to vacate the premises in case of a severe epidemic of smallpox. The accommodation was originally used entirely for 57 pulmonary cases, but in February, 1925, to meet an emergency, the male pavilion was adapted for 24 non-pulmonary cases. The accommodation now provided is : Pulmonary cases, 16 males and 25 females ; non-pulmonary cases, 12 males and 12 females ; total 65.

The County Council decided in August, 1925, to erect a suitable building for an X-ray apparatus, and the installation was completed in June, 1926.

The following table gives the condition of patients discharged (excluding deaths) during 1924 and 1925 :—

Condition on discharge of 248 persons who received treatment in Elswick Sanatorium during 1924 and 1925.

† Stage of Disease on Admission.	Total number Discharged.	Average Duration of Treatment in Months.	Condition on Discharge.				
			Quiescent.	Improved.	Stationary.	Worse.	* No Information.
			%	%	%	%	%
Stage I. & I.S—							
Males	58	5·1	37·9	39·6	8·6	...	13·8
Females ...	50	5·1	70·0	16·0	10·0	2·0	2·0
Total ...	108	...	52·8	28·7	9·2	0·9	8·3
Stage II. & II.S—							
Males	88	5·3	15·9	54·5	11·4	6·8	11·4
Females ...	41	7·0	24·4	48·8	19·5	7·3	...
Total ...	129	...	18·6	52·7	13·9	6·9	7·7
Stage III. & III.S—							
Males	4	5·2	...	...	25·0	25·0	50·0
Females ...	7	4·2	28·6	42·8	28·6	...	...
Total ...	11	...	18·2	27·2	27·2	9·1	18·2

* Includes patients discharged for other than medical reasons.

† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms, as suggested by Philip.

Of the four houses provided under the County housing scheme, three are occupied by male employees, and the fourth has been converted into an auxiliary nursing home for one sister and two nurses.

Dental treatment was afforded by the visiting dentist (Mr. J. J. Ward, L.D.S.) to 98 patients at this sanatorium.

Dr. Leggat reports as follows on matters relating to the treatment of patients and the administration of the sanatorium :—

> As mentioned in last year's report, one block consisting of two wards was utilised for the treatment of cases suffering from bone and joint tuberculosis, so that for the past twelve months both pulmonary and non-pulmonary cases have undergone treatment at the sanatorium. Arrangements have been carefully carried out so that there is complete isolation of the two types.
>
> In regard to the pulmonary cases, the treatment has been carried out on the same lines as in previous years. The average length of the patients' stay in the sanatorium has been increased ; this is in part due to a more careful selection of the type of case admitted, and also to the greater proportion of female patients. I find from experience that the female patient is much more willing to remain for prolonged treatment in the sanatorium than the male patient. The latter, unfortunately for his treatment, is more often than not the bread-winner, whose mind is harassed by the thought of a wife and family struggling to make ends meet at home. The result is that as soon as he feels fit for work he wants to be off and earning a wage, which, though it may show a very good spirit on the man's part, unfortunately tends to add one more to the list of pulmonary hospital cases. The after-care schemes in the County are certainly doing a great deal to help in assisting these necessitous cases.
>
> The workshop and poultry continue to provide useful and congenial occupations for the patients. A new type of work has been started, namely net making, which is very easy to learn and most suitable for patients who are only fit for a light grade of work. The poultry farm provides occupation for ten female and one male patient, who work under the direction of the instructor. During the year, 29,558 eggs were supplied to the sanatorium or sold. After allowing for the keep and wage of the instructor, the poultry account shows a small profit.
>
> In addition to the various forms of occupation, recreation of all kinds is provided for the patients. The latest acquisition has been a Burndept four-valve wireless set at a cost of about

£90; £73 of this amount was collected by voluntary subscriptions. The wiring was carried out by the staff and patients, and is so arranged that a loud speaker is provided in each of the wards, the patients', nurses' and maids' dining rooms, and the matron's sitting room. The wireless has been most popular, and has proved a great boon to both the staff and the patients. We offer our sincere thanks to the Committee for their contributory grant, and to all of those who were most generous in their subscriptions.

The usual lectures were given to the probationer nurses throughout the winter months, the subjects included being anatomy, physiology, and hygiene. In addition, the matron gave a course of instruction on general nursing. Lectures were also given to patients by myself on the same lines as in previous years, namely, on the causation, treatment, and prevention of tuberculosis.

As regards the non-pulmonary cases; to meet the requirements necessary in the treatment of this particular type a certain amount of reconstructional work was carried out during the year. Two side wards were utilised and equipped—one as an operating theatre, and the other as a plaster room.

A hut for housing the X-ray plant, with waiting-room and dark room, was completed in June, 1926. The provision of X-rays will be of great assistance in the diagnosis and treatment of both the pulmonary and non-pulmonary cases.

An atmospheric mercury vapour lamp was provided in February, 1926, for the treatment of the non-pulmonary cases, but at present the experience has been too short for any opinion to be given as regards results.

The treatment which has been adopted for the non-pulmonary cases has been general treatment on much the same lines as in the pulmonary cases, with, in addition, local treatment of the affected part so as to prevent or correct deformity. Surgical interference was only employed for the aspiration of abscesses, the occasional removal of sequestra and opening up where there was definite pocketing and a want of free-drainage. In one old standing case amputation became necessary. Considering that the greater percentage of the patients admitted to Elswick were old standing cases of several years' duration, most of them with discharging sinuses, and many of them with multiple foci and other complications, the results at the end of twelve months have been most encouraging.

Fortunately the summer of 1925 was most favourable for treatment by heliotherapy, and many of the eases, more partieularly those who responded to the sun's rays and beeame well pigmented, showed a marked improvement both generally and loeally.

Almost every ease admitted to the sanatorium has required dental treatment, and this has been earried out in a most effieient manner by Mr. J. J. Ward, L.D.S., of Preston. The results of his good work have been of great assistanee to me in the treatment of the patients.

The diseipline for the year has been very good, and the patients on the whole appear to appreciate more fully the value of prolonged treatment in a sanatorium.

(4) Chadderton Pulmonary Hospital.

Visiting Medical Superintendent :
James Wood, M.D., M.B., Ch.B., D.P.H., R.C.P.S.I.

Matron : Miss D. Willman.

An agreement was made on the 1st Oetober, 1919, with the Chadderton, Royton, and Crompton Joint Hospital Board for the use of the buildings, ereeted as a smallpox hospital, for the treatment of patients suffering from pulmonary tubereulosis. Aeeommodation is now provided for 40 female patients. The County Council are under an obligation to vaeate the premises in ease of an epidemie of smallpox.

Dr. Wood reports as under on matters relating to the hospital :—

During the year the patients have been very eontented, and most of them remained in hospital for eonsiderable periods.

Although in most of the patients the disease is in an advaneed stage when admitted, it has been pleasing to see marked improvement in several of them, and after long periods in the hospital they have been transferred to a sanatorium for further treatment.

No new methods of treatment were tried during the year.

For treatment of the severe eases rest in bed, fresh air and good food are the ehief means used. Others, who are in better eondition and fit, are allowed varied walks and to do a little work.

Good use has been made of the libraries by the patients and and staff. The wireless set has been mueh appreeiated, as also have the entertainments kindly given by various people from the surrounding distriets.

The grounds improve each year, and the display of flowers grown during the year was very pleasing.

The matron (Miss Moseley) left in June to take a similar position under the County Council at Rufford, and her place has been taken by Miss D. Willman from Peel Hall.

The changes in the nursing and domestic staffs have been very few.

Altogether 81 specimens of sputum were examined for tubercle bacilli ; 32 were found to be positive and 16 negative ; the remaining 33 were re-examinations of the negative sputa.

(5) Heath Charnock Pulmonary Hospital, near Chorley.

Medical Superintendent :
J. W. Rigby, L.R.C.P. (Lond.), M.R.C.S. (Eng.).

Matron : Miss H. Sinclair.

By agreement with the Chorley Joint Hospital Board, the County Council erected, equipped, and furnished two pavilions, containing 16 and 14 beds respectively, together with a dining-hall and some staff accommodation. The pavilions were opened in November, 1914. In 1921, a hut was erected as a recreation-room for male patients. The Joint Board are responsible for the administration of the hospital, the County Council paying to them the cost of maintenance.

Dr. Rigby has kindly furnished the following report :—

The hospital is now in such a condition that little can be done to improve it. The shelters at the end of the verandahs, as suggested in my last report, have been erected and add much to the comfort of the patients. The grounds have been again improved and cultivated, leaving little to be done with the exception of the lawns and one path. We hope these will shortly be attended to, and then Heath Charnock Hospital will compare very favourably with any hospital in the county.

With regard to the patients, the chief change has been the removal of the female inmates to other hospitals—we have now 30 males. So far the conduct of the male inmates has been good, but the staff regret the change and hope before long for a return to the old conditions of a mixed population.

As regards treatment, we rely chiefly on good food and fresh air, and, from my experience of now six years on these cases of advanced disease, I am led to think this is the best. Some cases do improve most amazingly when so treated, and

relief is afforded in many others. I am sorry to say my experience of " vaunted and advertised " remedies tried this year has not been any more encouraging than those of the past. During their stay the patients are taught how to look after themselves and to exercise strict precautions, so that if they do return home they will not be a danger to others with whom they have to live or come in contact.

(6) Peel Hall Pulmonary Hospital, Little Hulton.

Visiting Medical Superintendent :
G. Jessel, M.A., M.D. (Oxon.), D.P.H. (Manchester).

Matron : Miss A. Jones.

The Hall, with about 17 acres of land attached thereto, was presented in 1914 to the Lancashire County Council by Mr. A. Wynne-Corrie, and an additional 20 acres of land has been purchased. The adaptation of the premises as a pulmonary hospital for the treatment of advanced and chronic cases suffering from tuberculosis—delayed owing to the Great War—was completed in 1921. The County Council in August, 1926, decided to acquire an additional 8 acres of land on the north side of the estate to remove the possibility of dwelling-houses being erected in too close proximity to the hospital.

The accommodation has been increased from 46 to 52 by the provision of sleeping shelters. The hospital serves principally Dispensary Area No. 4 in taking advanced, observation, and educational cases.

A motor ambulance is also provided and is available also for conveying patients from their homes to other hospitals.

Dr. Jessel reports as follows on the year's work at the hospital :—

> The past year has been one of steady progress. Both inside the hospital and especially in the gardens and grounds various alterations and improvements have been carried out in such a way as to secure the maximum benefit as economically as possible. Both staff and patients have shown great keenness in helping forward the various schemes that have been in progress.
>
> The patients, as in previous years, have been nearly all chronic or advanced pulmonary cases, some of whom have also had tuberculous lesions in other parts of the body, *e.g.*, glands, elbow, hip, hand, foot, ribs, skin, etc., in addition to extensive chest disease. These conditions have also received suitable treatment.
>
> During the year, 95 patients completed their course of treatment, the average duration of stay being 114 days. Some of

these patients were improved considerably in health and a few were fit to return to work. There were in addition, 34 cases, where the stay was terminated by the death of the patient. These were very advanced cases where the facilities for nursing and isolation at home were slight or non-existent. The average length of stay of these cases was 130 days. It is thus clear that the hospital is fulfilling the objects for which it was established, viz., the nursing and isolation of chronic and advanced infectious patients, so that they may, if possible, regain some degree of their former health and strength, while at the same time the risks of infection of their families are reduced to zero, so long as they remain in hospital.

In June, 1925, two single shelters were erected and they have been occupied by patients ever since. So popular have they proved that two others are being provided in 1926.

The experiment has been tried of reducing walking as such to a minimum owing to the monotony of this when the sole form of exercise. Patients, who are up all day, are as soon as possible encouraged to undertake some useful occupation as a hobby for periods up to one hour morning and afternoon. They have a wide choice of suitable hobby-occupations, graduated according to their physical condition, and all involve some walking. Thus, in addition to the various garden activities, there have been men engaged in the wood-sheds, in the garage, with the engineer, on window cleaning, painting, repairs to greenhouses, pointing brickwork, etc., and as assistant librarian. It has been possible in this way to absorb all the available men, who have undoubtedly benefited by the exercise and use of mind and body. They have in this way been assisted to preserve that cheerful and hopeful outlook on life, which is so essential in such a disease as tuberculosis.

The recreations and amusements of the patients have, as usual, received special attention. These include billiards, cards, and such like, a five-valve wireless set, a library of over 500 volumes, piano, gramophones, etc., and from time to time concert parties have visited the institution. The outdoor games include bowls, croquet, and clock-golf. The Christmas festivities and decorations were on a lavish scale, and a photograph of one of the wards appeared in the local newspaper.

Each patient has received individual attention, due regard being paid to actual physical condition, temperament, and home circumstances. In view of the fact that the patients consist of 50 men of various types and circumstances, the discipline has

bcen remarkably good. Every effort is made to foster a community spirit and feeling of esprit dc corps among them, and it is soon realised that such simple regulations as exist have been framed in the patients' own interest for their happiness and wellbcing. The matron and nursing staff have been unremitting in their attention to the needs of the patients and it is pleasing to record frequent expressions of appreciation of their endeavours.

(7) Rufford Pulmonary Hospital.

Visiting Medical Superintendent :
C. W. Laird, B.A., M.D. (Dublin), D.P.H. (Liverpool).

Matron : Miss E. Moseley.

The County Council acquired, on the 18th October, 1920, Rufford New Hall, situated on the wcst side of the main road from Preston to Ormskirk, togcther with 128 acres of land adjoining the Hall. Under prcssure from the Ministry of Health, a schcme was prepared for using the Hall and land for discharged sailors and soldiers, and the scheme included training the patients in several occupations. Some additional land was also obtaincd with a view to training in agricultural work. All this, however, was abandoned by order of the Ministry of Health, owing to the financial stringency.

On 3rd January, 1924, the Lancashire County Council received the sum of £7,931 from the Lancashire Insurancc Committee, being the credit balance on the Sanatorium Benefit Fund. The Council decided, with the consent of the Ministry of Health, that this important sum should be utilised as capital expenditure for an cxtension of the County scheme dealing with the prevention and treatment of tuberculosis rather than that the amount should be used for current revenue purposes. Owing to the pressing need for accommodation for advanced cases of pulmonary tuberculosis and for non-pulmonary tuberculosis in adults, the Council decided to spend this sum, obtained from the Sanatorium Benefit Fund, on alterations and additions to the Hall. The adaptation of thc buildings as a pulmonary hospital to accommodate 50 patients was completed carly in 1926, and the first patients were admitted on the 7th April. In addition to the ordinary requircments of a pulmonary hospital, an operating theatre, plaster room, and X-ray room have been provided. The capital cost has becn estimated at £10,171, and this is being met by the aforementioned sum of £7,931 from the Sanatorium Benefit Fund, together with a capital grant from the Ministry of Health of £2,240. Thus, the entire work of adaptation and furnishing will be carried out without any capital cost falling on the County rate.

(7) Rufford Pulmonary Hospital (*continued*).

A motor ambulance has also been provided, available for the hospital and also for conveying County patients to other hospitals—often involving journeys of 100 miles. The hospital was formally opened by Sir Henry F. Hibbert, the Chairman of the Lancashire County Council, on the 5th August, 1926, when members of the County Council and the Lancashire Insurance Committee, and other visitors—about 200 persons in all—attended on the invitation of the Chairman and members of the County Tuberculosis Committee.

Several photographs of the hospital are here reproduced.

(8) Withnell Hall Pulmonary Hospital.

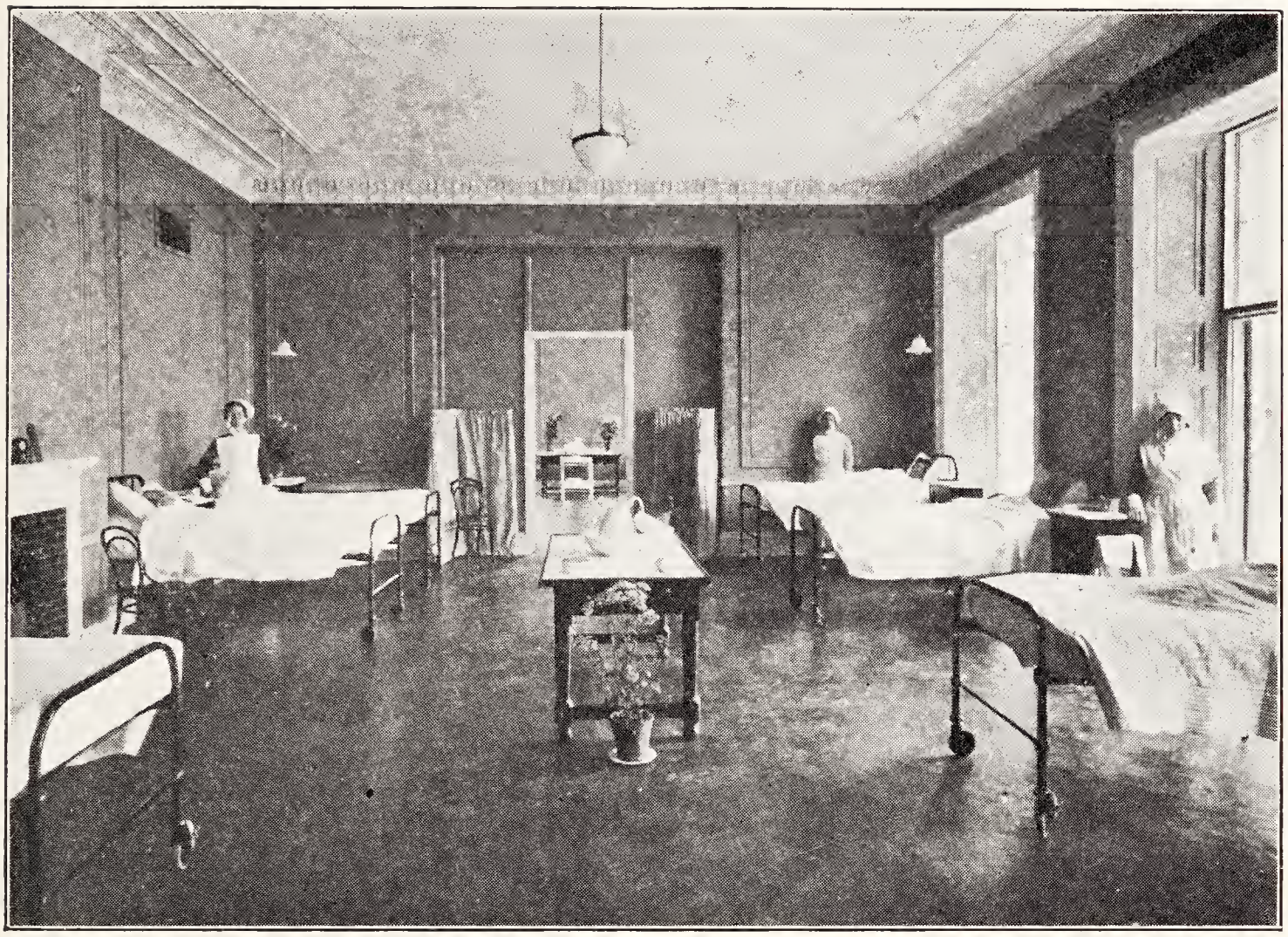
The Ministry of Health have decided that the pavilion at Bull Hill, Darwen, belonging to the Darwen Corporation, providing accommodation for 20 advanced cases of pulmonary tuberculosis, should revert to its original purpose of the treatment of ordinary infectious disease. To replace and also to increase the accommodation which will be lost by the closure of the Bull Hill Hospital, the County Council on the 7th August, 1924, decided to purchase Withnell Hall, situated on the main road from Blackburn to Chorley. The cost of the Hall, outbuildings, and about 37 acres of land was £5,250. A tender has been accepted for the adaptation of the Hall and the provision of a new block for patients, and the work is now in the builders' hands. The plans provide for 46 beds together with X-ray room, dining room and accommodation for the ordinary requirements of patients. The visiting medical superintendent will be the consultant tuberculosis officer for dispensary area 2, from which area the majority of patients will come.

(9) Wrightington Hall, near Wigan.

The County Council, in November, 1920, decided to purchase Wrightington Hall and estate of 159 acres, with a view to utilising it eventually for the provision of accommodation for children.

The Hall is situated on the high road between Standish and Parbold, about six miles north-west of Wigan, and stands at an altitude of 300 feet above sea-level.

Plans were prepared in 1921 for the adaptation of the buildings, but under instructions from the Ministry of Health no work was commenced, and the scheme remained in abeyance until early in 1926 when the County Council approved generally of proposals to adapt the Hall and erect five pavilions, as well as isolation, treatment, kitchen, and official blocks to provide accommodation for 226 patients—80 beds for adults and 146 for children. Estimates of the cost of the scheme are being prepared, and the whole scheme will be reconsidered by the County Council.



RUFFORD PULMONARY HOSPITAL.—A WARD IN ONE OF THE ADAPTED ROOMS.

RUFFORD PULMONARY HOSPITAL.—VERANDAHS FOR PATIENTS.

[Photos by "Preston Guardian."

RUFFORD PULMONARY HOSPITAL.—RECREATION ROOM.

RUFFORD PULMONARY HOSPITAL.—VIEW FROM THE NORTH.

[*Photos by "Preston Guardian."*

DENTAL TREATMENT.

Patients eligible for dental treatment are those who, in the opinion of the medical superintendent or tuberculosis officer, are unable to derive full benefit from treatment owing to defective teeth. Patients already covered by dental schemes of other bodies are excluded from benefit.

The following statement shows the dental work carried out during 1925, under the scheme approved by the County Council :—

TABLE 13.

	At High Carley Sanatorium.	At Elswick Sanatorium.	At other Sanatoria and Hospitals.	At Patients' Homes.	Total.
Total No. of individual patients who reeeived dental attention (any form)	161	98	245	20	524
New Dentures provided—					
(*a*) Complete sets	19	4	17	9	49
(*b*) Partial sets	33	11	24	10	78
Repairs to Dentures	14	4	10	2	30
No. of Extractions	305	262	432	153	1,152
No. of Fillings	81	32	9	...	122
No. of Sealings and Cleanings ...	2,612	354	24	...	2,990
No. of other Operations	354	170	...	...	524

The dental scheme, considering the benefit derived by the patients, has proved economical, and is fully justified.

SANATORIUM TREATMENT—IMMEDIATE RESULTS.

Condition of 9,174 Patients on Discharge from Sanatorium.

Between 15th July, 1912, and 31st December, 1925, the following numbers of patients received a period or periods of sanatorium treatment, and have been discharged :—

Adults	8,667	9,174
Children	507	

In the foregoing figures a patient is counted once only, even though he may have received two or more separate periods of treatment. The number of admissions and re-admissions of patients to sanatoria in 1925 was 802, as compared with 805 in the previous year and 838 in 1923.

These cases are distinct from those who received treatment in a pulmonary hospital or observation hospital. Such treatment is granted almost solely for purposes of education or isolation, and no useful purpose is attained in trying to show curative results.

Under the County scheme, patients have never been limited to any definite period—the length of stay depending on the recommendation of the medical superintendent. Cases likely to become quiescent have always received as long a period of treatment as considered necessary on medical grounds. In spite of there being no fixed period of treatment, the average duration is about four months, and this figure is not affected by patients leaving prematurely for other than medical reasons, as deduction is made for these. In 1924 and 1925, and continuing in 1926, patients have remained in sanatoria progressively longer than the average of previous years.

The following table, summarising the *immediate* results of sanatorium treatment, have been prepared from the information as to the condition of patients given by medical superintendents in their discharge reports :—

TABLE 14.—*Immediate Results of Sanatorium Treatment, 1912–1925.*

Adults or Children.	† Stage of Disease on Admission.	Sputum.	No. of Cases.	Condition on Discharge from Sanatorium.				
				Quiescent. %	Improved. %	Stationary. %	Worse. %	* No Information. %
Adults (15 and over).	I. and I.S	Positive ...	1,675	18·1	49·7	9·5	5·2	17·5
		Negative ...	2,133	41·9	37·3	3·1	0·8	16·9
		None ...	660	53·0	31·8	3·0	0·7	11·4
		Total ...	4,518‡	34·3	40·9	5·5	2·4	16·9
	II. and II.S	Positive ...	2,587	9·3	50·2	12·0	8·7	19·7
		Negative ...	788	29·3	45·8	3·4	1·5	19·9
		None ...	172	38·9	40·7	5·2	2·3	12·8
		Total ...	3,583§	15·0	48·4	9·7	6·7	20·1
Children (under 15).	I. and I.S	Positive ...	14	28·6	28·6	7·1	7·1	28·6
		Negative ...	125	54·4	33·6	3·2	0·8	8·0
		None ...	226	55·3	28·3	1·8	0·9	13·7
		Total ...	365	53·9	30·1	2·5	1·1	12·3
	II. and II.S	Positive ...	15	—	26·6	26·6	26·6	20·0
		Negative ...	43	44·2	34·9	6·9	2·3	11·6
		None ...	57	49·1	29·8	5·3	8·8	7·0
		Total ...	115	40·9	31·3	8·7	8·7	10·4

* Includes patients discharged for other than medical reasons.
† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms as suggested by Philip.
‡ Includes 50 cases where the sputum was not examined.
§ Includes 36 cases where the sputum was not examined.

From the foregoing table it will be seen that the earlier the stage at which a patient is admitted to a sanatorium—and more especially when tubercle bacilli are not found in the sputum—the greater are the beneficial effects of several months' sanatorium treatment.

The advanced or third stage cases have not been included in Table 14 above, as they were not strictly suitable subjects for sanatorium treatment; they were admitted chiefly in 1912 and 1913, before the County dispensary organisation was set up.

AFTER-RESULTS OF TREATMENT.

Owing to the changes in the classification of cases required to be adopted by the Ministry of Health (as explained in Appendix V) it has not been possible in the time at disposal to prepare the usual detailed tables showing the after-results of the several forms of institutional treatment, and alternatively, home treatment, but it is hoped to resume the compilation of these tables next year based on the new classification.

Nothing has occurred, however, to alter the conclusions arrived at as the result of the examination of the after-histories of patients in previous years, and avoiding exact figures, I give below as concisely as possible, the general conclusions on the treatment afforded patients in institutions and at home.

1.—Taking the several thousand patients who remained two months or more in a sanatorium, the cases with negative sputum, as might be expected, fared much better—from twice to five times according to the type of case—in after life than those with a positive sputum.

2.—Contrasted with the 2,000 patients who did not for some reason go to a sanatorium, those who received institutional treatment invariably did better in after-life, the difference in their favour varying from 20 per cent. to nearly 300 per cent. according to the type of case.

3.—Early diagnosis is a very important factor in the successful treatment of pulmonary tuberculosis, whether at the sanatorium or at home.

4.—In both sanatorium and non-sanatorium cases, patients with a negative or absent sputum throughout treatment are much more likely to remain fit for work, and less liable to succumb to the disease than those with tubercle bacilli in the sputum.

5.—With regard to non-pulmonary tuberculosis, considerable advance has been made in recent years in the methods of treatment, particularly of crippled children, and taking the 1,500 cases treated since 1914 in general or special hospitals, the percentage of deaths has in no type of case exceeded 17·0 per cent.

TREATMENT IN PULMONARY HOSPITALS

In dealing with advanced and highly infectious cases in a County area there are several important considerations to be borne in mind. First, it is undesirable to have large numbers of advanced or acutely ill cases in one institution, and secondly, where such cases are treated they ought to be as near their homes as possible for convenience of visiting by relatives. The treatment given in pulmonary hospitals *is quite distinct from that at sanatoria ;* for in sanatoria early cases are taken and treated for a probable arrest or cure of the disease. In the pulmonary hospitals, however, patients are admitted for the purposes of isolation, occasionally for observation in regard to diagnosis, and particularly for education in general methods of hygiene which, when the patients return home, can be applied in suitable cases, much more effectively after a short period of institutional treatment.

In four of the five dispensing areas, when present schemes are completed, one of these hospitals will be in charge of the consultant tuberculosis officer, a very useful arrangement because patients come to these hospitals from the area administered by the tuberculosis officer, who is, therefore, conversant with the home conditions. Further, it is of great advantage to the tuberculosis officer, because it provides the means of applying certain forms of treatment and of carrying out valuable clinical and research work.

Often patients from each of the five dispensary areas requiring isolation are accommodated as far as possible in the pulmonary hospitals (in the majority of cases consisting of buildings attached to isolation hospitals) situated in or near the area, and, in order that the consultant tuberculosis officers may keep themselves acquainted with the cases, arrangements have been made (with one or two exceptions, where only occasional County cases are treated) for the tuberculosis officers to visit periodically the pulmonary hospitals in their area and confer with the medical superintendents on the following matters :— (1) The question of extension of patients' treatment or their return home, having special regard to the home conditions which are known to the tuberculosis officer ; (2) the question as to patients' future treatment ; (3) applications from patients for transfer to other institutions, or for their discharge home, and to settle, where possible, any difficulties or complaints by patients which may arise.

The foregoing working arrangements have enabled the highly infective cases with unsatisfactory home conditions to remain at the pulmonary hospitals for long periods for the purpose of isolation, and for patients who have made good progress and are capable of light work to be transferred to sanatoria for the continuation of their treatment.

By the Public Health Act of 1925, a County Council now has power to secure the compulsory isolation of infectious cases on the order of the magistrates, but so far it has not been necessary to exercise that power.

The isolation of patients removed from unsatisfactory home conditions where proper nursing is impossible is one of the best known methods for the prevention of tuberculosis, and, therefore, money devoted to this purpose is well spent in removing the source of infection, and thus reducing the number of new cases.

Brief particulars are given in Appendix III of the arrangements existing for the use of accommodation for County patients at 17 pulmonary hospitals.

The following table gives particulars of the patients treated at the various pulmonary hospitals, shown under the appropriate stages. From this statement it will be observed that 4,584 persons were admitted to and discharged from pulmonary hospitals from July, 1912, to the 31st December, 1925 :—

TABLE 15.

† Stage of Disease on Admission, Age and Sex.			Total No. of Admissions (1912 to 1925).	No. of Transfers to Sanatoria.	No. of Discharges.	No. of Deaths in Hospital.	Average duration of Treatment in months.	Maximum duration of Treatment in months.
Stage I. & I.S—								
Children	M.	...	8	1	6	1	2·6	4·5
	F.	...	10	1	8	1	4·4	7·7
Adults	M.	...	130	6	108	16	4·0	43·7
	F.	...	115	5	97	13	4·3	23·0
Total	...	...	263	13	219	31	—	—
Stage II. & II.S—								
Children	M.	...	16	1	11	4	4·1	20·7
	F.	...	22	2	15	5	5·2	13·0
Adults	M.	...	984	40	724	220	4·6	74·0
	F.	...	646	23	460	163	4·9	53·2
Total	...	...	1668	66	1210	392	—	—
Stage III. & III.S—								
Children	M.	...	16	2	10	4	4·3	12·0
	F.	...	47	3	30	14	6·1	19·5
Adults	M.	...	1545	43	1000	502	4·6	57·2
	F.	...	1045	32	676	337	4·4	43·7
Total	...	...	2653	80	1716	857	—	—

† Classified according to the system of Turban-Gerhardt, and further sub-divided into cases with slight and severe constitutional symptoms as suggested by Philip.
N.B.—Patients under 15 years classified as children ; 15 years and over classified as adults.

In the foregoing table a patient is counted once only, even though he may have received two or more separate periods of treatment. The number of admissions and re-admissions of patients to pulmonary hospitals in 1925 was 587, as compared with 573 in the previous year.

NON-PULMONARY TUBERCULOSIS.

As every layman and doctor knows, the tubercle bacillus attacks not only the lungs, but other parts of the body, in a great many men, women, and children. Lupus, meningitis, bone and joint disease, glandular affections—these are known to everyone. The number of new cases is decreasing, owing in part, at any rate, to preventive medicine, but the number of living non-pulmonary cases in the whole Administrative County of Lancaster is still a very large one; the tuberculosis medical staff have, out of a population of 1,785,500, under supervision 2,046 adults and 1,615 children. Fortunately, only one in ten of these are active cases, and already 862 cases which have completed three years without symptoms have been written off the register as cured, while a further considerable number of cases are about to be dealt with similarly; for non-pulmonary tuberculosis, under new and modern methods, is curable in a large number of cases, provided prolonged treatment can be given. In children, 80 to 90 per cent. of cases can be cured where the infection is in the bones and joints.

The County Scheme.

(*a*) *Dispensary Unit including "after-care."*

In dealing with tuberculosis, the County scheme embraces the whole Administrative County area, i.e., it includes the autonomous education areas like Lancaster, Nelson, Ashton-under-Lyne and Stretford, and it is in such areas that more than half of the cases exist. The tuberculosis officers see at the dispensaries or the homes all the cases—adults and children—notified or sent for an opinion as to diagnosis.

So that the medical staff might deal efficiently with this work, especially among children, the Tuberculosis Committee sent all in turn to study at the Lord Mayor Treloar Cripples' Hospital at Alton, under Sir Henry Gauvain—a most valuable step.

In addition, three of the consultant tuberculosis officers have attended recent post-graduate courses on the treatment of non-pulmonary tuberculosis. As a consequence the staff is well qualified to deal with its part of the work—the diagnosing and treatment of cases at the dispensaries or the homes. Selected patients with discharging wounds are dressed as required, while suitable cases are now receiving light treatment at two dispensaries; others are supplied with surgical appliances or special nourishment, which, to earn the Ministry's grant, must be on the recommendation of the tuberculosis officer. The patients are also eligible to receive other benefits under the County tuberculosis scheme, e.g., loan of nursing utensils, spinal carriages, invalid chairs, and so on, grants from the care fund, X-ray examinations by the tuberculosis officers, and artificial light treatment. The disease is essentially a constitutional one, the home conditions are of

great importance, and contact cases of non-pulmonary patients require examination and supervision. A non-pulmonary case not infrequently occurs in the same household as a case of consumption. The latter is often the source of infection of the former.

On the whole, not a great many cases of non-pulmonary tuberculosis require major operations, although medical opinion is not unanimous on this point. Through the dispensary organisation patients requiring major operations are sent either direct to a hospital or (where the diagnosis has been of special difficulty) to the out-patient department of such hospitals as the Ancoats Hospital, Manchester, the David Lewis Northern Hospital, Liverpool, and the Myrtle Street Hospital, Liverpool.

The co-operation with family doctors, the medical staff of voluntary hospitals, and school medical officers, is shown by the following table, giving the source of the non-pulmonary cases either sent for diagnosis or notified in the County in 1925 :—

At family doctor's request	237
By notification under statutory regulations	272
At request of medical staff of voluntary hospitals ...	90
At request of school medical officers	76
At request of Pensions committees and other bodies ...	7
Discovered by tuberculosis officers as " contacts " ...	24
Transfers from other areas	9
Total non-pulmonary applications for the year 1925	715

The County Tuberculosis Committee have, besides the medical staff, a number of nurses (4 to 6) in each dispensary area. Some of the nurses, who have been appointed on the staff during the past few years, have been selected because of their knowledge of surgical tuberculosis.

Thus throughout the County the dispensaries are the centres of " after-care " for the non-pulmonary cases.

(b) The Hospital or Institutional Unit.

The number of beds occupied by County patients in special and general hospitals at the end of 1925 was as follows :—

	No. of Beds 31-12-25. Adults.	Children.
Special Hospitals (e.g., Leasowe, Alton, Heatherwood, Heswall, Shropshire Orthopædic, Elswick Sanatorium, West Kirby, and Sheffield)	50	123
General Hospitals and Infirmaries (e.g., Ancoats, Ashton-under-Lyne, Blackburn, Manchester, Preston, Salford, Warrington, and Wigan) ...	28	12
	78	135
Number of Beds occupied on 31st Dec., 1925	213	

With regard to the treatment of patients suffering from tuberculosis of the skin (lupus) the large majority are sent to the out-patient department of the Manchester and Salford Hospital for Skin Diseases, travelling as directed, at intervals of one, two, four or more weeks. In addition to the special treatment at this hospital, the patients receive sufficient medicine and ointment for use between visits. The appropriate tuberculosis officer is informed of the necessary frequency for the patients' attendances and the nature of the treatment provided at the hospital.

By taking beds at various institutions outside the County when the opportunity presented itself, the position in regard to accommodation for children has been appreciably improved during the past few years ; but, on the other hand, there is undoubtedly a lack of accommodation at suitable hospitals for adult cases, particularly the difficult " combined " cases of pulmonary and non-pulmonary tuberculosis ; the deficiency in this type of accommodation is, as a matter of fact, general throughout the country.

Need for Additional Institutional Accommodation.

First, beyond five or six beds reserved at the Rufford Pulmonary Hospital early in 1926, there is no adequate accommodation available for patients suffering from pulmonary and non-pulmonary tuberculosis combined, and requiring special treatment more particularly for the non-pulmonary condition. Such cases are not admitted to general hospitals owing to their infectious state, nor can they be taken in pulmonary hospitals which are not equipped or staffed to deal with the severe non-pulmonary condition. The severe combined cases are very distressing, but happily these cases are not very numerous, and 20 beds for the severe type would suffice for both sexes. Provision is being made at the Withnell Pulmonary Hospital for mild non-pulmonary disease combined with pulmonary.

Second, the County Council are almost entirely dependent for their accommodation in special and general hospitals on the voluntary bodies, and there is always the danger of losing beds at one or other of these particular institutions (as has actually occurred in the case of the Pilkington Special Hospital). Furthermore, some cases have to wait too long for admission. The danger of losing existing beds will be much more evident in the future when the schemes of many of the county boroughs mature and these authorities enter into competition for beds.

Also, from time to time difficult cases arise which the surgeons of voluntary hospitals find themselves unable to retain, and the only satisfactory solution for the treatment of such cases, in my opinion, is the provision of beds by the County Council for Lancashire patients.

Finally, an institution with a really up-to-date light installation would cure the patients suitable for this special form of treatment more quickly than by present methods. This would allow a greater "turn-over" of beds, and the effect would be to free some 20 to 30 beds in other hospitals, for which the County Council pay maintenance varying in amount up to £3 per week.

Scheme for Providing Additional Accommodation at Wrightington Hall.

In 1921, Wrightington Hall, near Parbold, and about 159 acres of land, was purchased, with the approval of the Ministry of Health, for the treatment of County patients (adults and children) suffering from non-pulmonary tuberculosis, and pulmonary and non-pulmonary tuberculosis combined in the same person.

A scheme was approved by the County Council in February, 1921, to use the Hall and grounds, but the Ministry of Health intervened, and under their instructions all work was suspended in pursuance of the financial policy of the Government at that time.

The County Council have recently reviewed the position as regards facilities for the treatment of non-pulmonary cases and combined cases. The Wrightington Hall estate is necessarily costing the Council a considerable sum per annum for interest and annual repayments of loan charges, and no use whatever is being made of it. In view of the fact that the Ministry of Health contribute to this upkeep, the Council approached them with regard to a reconsideration of the whole matter. The Council asked, after stating the points already mentioned, if the Ministry would consider a scheme to provide altogether 226 beds—80 for adults and 146 for children—to be treated in five new pavilions, the present Hall being adapted and enlarged for the purpose of an administrative block. Of the 226 beds, 110 would replace beds which would be given up at outside institutions, many of them with expensive maintenance charges, and 116 (60 for adults and 56 for children) would be entirely new and additional accommodation. The Ministry have replied that if such a scheme is brought forward by the County Council, they will make a grant, subject to the consent of the Treasury, of £180 per bed towards the capital cost.

The County Tuberculosis Committee have, after the most careful consideration of all the circumstances, agreed in principle to the above scheme for the utilisation of the estate, and have requested the County Architect to prepare for consideration at a future meeting the necessary plans and estimates.

Immediate Results of Institutional Treatment at General and Special Hospitals.

A summary of the condition on discharge of patients treated during 1925 in the general hospitals, the several children's special hospitals, and in the Manchester and Salford Skin Hospital is given below :—

Table 16.—*Condition of Patients discharged from General and Special Hospitals during* 1925.

Condition on Discharge	General Hospitals.		Special Hospitals for Children.		Skin Hospital.			
					Out-Patient.		*In-Patient.	
	M.	F.	M.	F.	M.	F.	M.	F.
Cured	45	37	8	10	6	18	...	...
Relieved	10	7	4	2	...	...	...	...
Improved	114	68	36	36	2	3	13	20
Stationary	19	10	5	...	...	...	...	...
Worse	3	3	1	1	...	...	...	...
Died	9	7	4	4	...	1†	...	...
Left for other than medical reasons ...	10	2	5	5	2	5	...	...
Discharged for treatment of another Disease ...	...	...	...	...	...	...	...	...
Transferred to Dispensary Supervision ...	...	...	...	...	26	34	...	...
Transferred to other Institutions	17	14	4	6	4	2	...	...
Diagnosis not confirmed	1	1	...	2	2	1	...	...
Removed	...	...	...	...	3	5	...	...
Total	228	149	67	66	45	69	13	20
Still under treatment ...	52	33	60	52	103	150	3	3
	280	182	127	118	148	219	16	23
Grand Total ...	462		245		367		39	

* 28 in-patients resumed out-patient treatment after discharge. Number of individual patients treated at Manchester and Salford Skin Hospital during 1925 was 406.

† This patient was attending the Skin Hospital for treatment, and the certified cause of death was Tuberculosis of Cutis and Morbus Cordis.

INSTITUTIONAL ACCOMMODATION.

On the 31st December, 1925, there were altogether 790 beds at sanatoria and hospitals occupied by County patients, as compared with 766 at the end of 1924.

The number of beds occupied fluctuates considerably during the course of the year : there is a greater demand for beds in the summer than during the winter. For instance, in the middle of 1926 the accommodation reached 901 beds. Consequently, a certain amount of elasticity is required in the acquirement of institutional accommodation to meet the needs of the moment.

Below is given a summary of the beds occupied at the several types of institutions at the end of 1925 and the previous four years, whilst in italics is given the accommodation as it stood in June, 1926 :—

TABLE 17.

Type of Institution	Number of beds in occupation at end of—					
	1921.	1922.	1923.	1924.	**1925.**	June 1926.
Pulmonary Tuberculosis :						
Sanatoria	327	324	343	335	328	*358*
Hospitals	199	211	230	204	217	*262*
Training Colonies	9	17	12	13	5	*9*
Non-Pulmonary Tuberculosis : Special and General Hospitals	98	118	157	209	215	*244*
" Observation " Cases :						
Sanatoria	8	8	8	5	23	*15*
Pulmonary Hospitals ...					1	*10*
Special and General Hospitals					1	*3*
Total	641	678	750	766	790	*901*

The names of the institutions and the number of beds taken by County patients are set out fully in Appendix IV.

Taking the institutional accommodation as it stood on June 30th, 1926, the number of sanatorium beds occupied worked out at *one* per 5,686 of the population, and the number of pulmonary hospital beds *one* per 6,834.

The number of admissions to sanatoria and hospitals during the past ten years is as follows :—

1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.
1286	1693	1722	1819	1914	2053	1970	2174	2030	1932

HOME TREATMENT AND DISPENSARY TREATMENT OR SUPERVISION.

All notified cases of tuberculosis receive while at home dispensary supervision exercised through the tuberculosis officers and tuberculosis health visitors, in addition to the treatment that may be obtained from their medical practitioners.

For insured persons suffering from tuberculosis, the "National Health Insurance (Medical Benefit) Regulations, 1924," contain references to the duties of practitioners, the following being the main provisions :—

1.—If the condition of the patient is such as to require treatment which is not within the scope of the practitioner's obligations under these terms of service, the practitioner shall advise the patient as to the steps which should be taken in order to obtain that treatment, and shall, where provision is made for such treatment by any Public Authority . . . take such other steps as may be reasonably necessary in order that the patient may derive full advantage from the provision of such treatment.

An insurance practitioner is required :—

2.—To prepare and send to the tuberculosis officer an initial report (on Form G.P. 17, Revised) in regard to each insured person as soon as the practitioner becomes aware that such insured person is suffering from tuberculosis ; and also to furnish an initial report on a case when requested by the tuberculosis officer.

3.—To prepare and send to the tubercnlosis officer periodical reports (quarterly) during the continuance of treatment by the practitioner.

4.—To prepare and send to the tuberculosis officer an immediate report on any serious change in the condition of a tuberculous patient.

5.—To confer with the tuberculosis officer in regard to any insured person on his list suffering from tuberculosis.

The Minister of Health (in Memo. No. 286) advises that an insurance practitioner should refer to the tuberculosis officer any case suspected to be suffering from tuberculosis in order that there may be no delay in giving the patient the benefit of any facilities available under the tuberculosis scheme of the local authority.

The most cordial and effective co-operation exists in the County between the tuberculosis medical staff and the family doctors.

Ordinary medical treatment at dispensaries has never been undertaken, unless the patient has no doctor or requires some special form of treatment. Patients with active disease are examined by the tuberculosis officer at frequent intervals, and placed for short periods—generally three months—on dispensary supervision, and granted other forms of treatment as found necessary. Quiescent or arrested cases are kept under supervision so long as they are well, and are reviewed annually.

It is highly desirable there should be close co-operation between the medical practitioner or family doctor and the County tuberculosis officer, and, prior to each examination of patients by the latter, information is sent to the medical attendant as to time and place. In some cases general practitioners confer with the tuberculosis officer in person, to their mutual advantage, and in other cases this end is secured by telephone or correspondence.

TUBERCULOUS EX-SERVICEMEN.

Number of Ex-Service Men Treated.

During 1925, there were 308 new applications for treatment from discharged sailors and soldiers (not necessarily pensioners), and these were classified in the following stages on commencing treatment under the County Council. The figures for the cases prior to 1925 are also given :—

Table 18.

Stage.	1914-1921.	1922.	1923.	1924.	1925.	Total.
Pulmonary—						
Stage I. ...	1,181	126	78	87	80	1,552
Stage II. ...	693	118	134	134	157	1,236
Stage III. ...	275	66	59	46	46	492
Non-Pulmonary ...	177	35	38	35	25	310
Total ...	2,326	345	309	302	308	3,590

In addition to the above total of 3,590, there were 39 men who did not receive any form of treatment, so that altogether 3,629 applications from tuberculous ex-service men have been dealt with from the commencement of the war in 1914 up to the end of 1925. After deducting deaths, removals, and cases where the diagnosis was not confirmed, there were 1,185 men living and undergoing some form of treatment on the 31st December, 1925, and in 553 of these cases the Ministry of Pensions had held that the disease was attributable to or aggravated by war service, and had consequently granted war pensions. The number of tuberculous pensioners, as anticipated, is now fairly rapidly declining, falling from 1,017 at the end of 1922, to 851 in 1923, 645 in 1924, and 553 in 1925.

The large majority of the men have received a period (in many cases two, three, or more periods) of institutional treatment, and in every instance priority of admission has been given. The cost of institutional treatment granted to tuberculous pensioners is borne by the Government, and their travelling expenses are met out of the funds of the Ministry of Pensions. Detailed claims for refund are accordingly submitted from time to time.

Special Nourishment to Ex-Service Men.

The cost of special nourishment ("extra diet") for tuberculous pensioners is borne by the Ministry of Pensions ; patients on full pension

or allowances are not eligible for the grant. Pensioners in need of special nourishment are recommended for it by their medical attendant to the local War Pensions Committee, who obtain the tuberculosis officer's counter-signature.

Relief Schemes for Ex-Service Men.

As mentioned in the chapter on care work, special arrangements exist as follows for the relief of tuberculous ex-service men :—(*a*) Those who are in receipt of war pensions are eligible within certain limits for assistance from the funds of the Joint Council of the Order of St. John of Jerusalem and British Red Cross Society ; (*b*) the large number of men without pensions owing to their disease not being connected with actual war service are eligible, subject to certain rather numerous exceptions and conditions, for help under the relief scheme of the United Services Fund as extended in 1923. The consultant tuberculosis officers work in close co-operation with the local representatives of these organisations.

Tuberculosis Officers as Medical Referees.

The consultant tuberculosis officers (or the assistants in their stead) act as medical referees of the Ministry of Pensions in regard to ex-service men suffering from tuberculosis, and in that capacity a very large number of men have been referred to them by the local War Pensions Committees and the Area Deputy Commissioners of Medical Services for examination and report.

The onus of taking the initiative in applying for a pension is thrown on the ex-service man, but the tuberculosis officers render all possible assistance to any claimant who has good grounds for his application.

The tuberculosis officers' recommendations for treatment are submitted to the County Council, who alone are responsible for arranging for the special treatment of tuberculous ex-service men.

The cost of the visitation of tuberculous pensioners in their homes by the dispensary nurses is refunded by the Government, but the Ministry of Health have now intimated that, in view of the small number of new pensionable cases occurring, the special financial arrangement will cease on the 1st April, 1927.

TREATMENT AND OCCUPATIONAL TRAINING, AND VILLAGE SETTLEMENTS.

Male patients recommended by the tuberculosis officers for a course of treatment combined with training are, by arrangement, sent to the East Lancashire Training Colony, Barrowmore Hall, Cheshire, and occasionally to the Delamere Training Colony, Frodsham, the trades or occupations taught being: pig-keeping, boot-repairing, poultry-farming, market gardening, carpentry, joinery, gardening, and watch and clock repairing.

The following table gives particulars of the patients so far granted a course of treatment combined with training:—

TABLE 19.—*Treatment and Occupational Training.*

Stage of Disease on Admission.	Total No. admitted (3rd Aug., 1920, to 31st Dec., 1925).	Total Number Discharged.	Average duration of stay at Colony* (months).	Patients Discharged.			Still undergoing Training, 31st Dec., 1925.
				Course of Training completed.	Training terminated before completion of course.	Transfer to Sanatoria or Hospital.	
Stage I.	44†	42†	16·50	18	22	2†	2
Stage II.	19†	17	14·25	6	11	...	2†
Stage III	3	2	30·50	1	1	...	1
Total	66	61	16·50	25	34	2	5

* Average duration relates to patients who completed course.
† Includes one Civilian.

Thus, of 61 patients who left training colonies, the great majority of whom were pensioners, *only* 25 (or 40 per cent.) were regular discharges on completion of the course. Whilst the proportion of the patients completing their training is better than last year (when it was only 28 per cent.), the fact that 36 out of 61 men (equal to 60 per cent.) terminated their course prematurely cannot be regarded as satisfactory, particularly as the patients were chosen with extreme care by the tuberculosis officers. The published figures for the whole of the country are likewise in my opinion disappointing.

How to deal with tuberculous patients, men and women, following unsuitable occupations, treating them in sanatoria and then training them in some new craft, and eventually settling a proportion of them with unsatisfactory home or working conditions in village settlements, is perhaps the most difficult matter now awaiting a solution on a large

scale in the whole tuberculosis problem. The several village settlements—of which the Cambridgeshire Tuberculosis Colony, Papworth, is the best example—established by voluntary bodies in this country are only able to deal with a fraction of the patients, and it is a matter of much controversy at present whether similar successful settlements could be established under schemes administered by public authorities.

The Joint Tuberculosis Council have recently appointed a special committee to investigate the various possibilities for the employment of tuberculous persons, either at home or in village settlements, and this committee—which has already issued a valuable preliminary report—is collecting important information and data which it is hoped will assist in finding a solution (if a solution is attainable) of the problem.

Reverting to the Lancashire figures, the reasons given for the 34 patients who left irregularly or prematurely are as follow :—

Medically unfit to continue training	8	34
Temperamentally unsuitable	5	
Discharged for disciplinary reasons	9	
Left on own responsibility and against advice ...	12	

Concerning the 25 men who duly completed their training, the following statement shows their position at the end of March, 1926 :—

Successfully following occupation in which trained	4	25
Following occupation in which trained, but with only partial success	2	
Colonised at East Lancashire Training Colony ...	5	
Fit for work, but unable to obtain employment ...	3	
Medically unfit for work	1	
Undergoing treatment in sanatorium	1	
Following other occupations	4	
Removed out of County area	4	
Died	1	

Thus, out of a total of 61 patients (less 4 removals and 1 death) who have received treatment and training, only 11 are successfully, or partially so, following the occupations in which they were trained. These figures are very significant. Under present conditions and arrangements, training colonies and training sections cannot be considered to have obtained successful results. Despite a most careful selection of patients, we know from experience the temperamental difficulty of persuading even a fraction of the men to complete their course, generally of twelve months' duration. And for the few who do graduate, there are severe obstacles to confront them in their efforts to follow their new occupation. First, twelve months' training is insufficient to enable them to enter the staple trades of the country ; and second, their physical

condition is often such as to handicap them in their competition with healthy men.

A trainee who is a pensioner receives during his course full treatment allowances, and is eligible for stipulated periods of leave, whilst on the satisfactory completion he becomes entitled to a training bonus and grant of tools from the Ministry of Pensions. Others are eligible for civil liability grants from the Ministry of Labour.

In view of the unfortunate lack of success in training men in new occupations and settling them in employment, recommendations for treatment and training are made with the greatest care and stringency; the number of new admissions in 1925 was 5.

Particulars of the five county patients who have been "settled" in houses or in the hostel at the East Lancashire Tuberculosis Colony, Barrowmore Hall (belonging to the Joint Council of the Order of St. John and the British Red Cross Society) are given below :—

14225.—G.A. Aged 25, ex-service man, pension, single. Sputum positive, early case on first examination. Trained in upholstery, previously press-hand in printing works. Has had 12 months in training colony, and 22 months sanatorium treatment.

16445.—C.M. Aged 30, ex-service man, no pension, single. Sputum negative, stage II. and T.B. spine (early) on first examination. Trained in woodwork, previously a bricklayer's labourer. Has had 12 months in training colony.

12767.—T.H.T. Aged 27, ex-service man, pension, married. Sputum positive, early case on first examination. Trained in poultry farming, previously a dairyman. Has had 20 months in training colony and 15 months sanatorium treatment.

14669.—R.B. Aged 31, ex-service man, no pension, married. Sputum positive, early case on first examination. Trained in carpentry, previously a police constable. Has had 12 months in training colony, and 8 months sanatorium treatment.

13985.—T.C. Aged 37, ex-service man, pension, single. Sputum positive, early case on first examination. Trained in boot-repairing, previously a labourer. Has had 14 months in training colony.

Whilst it is very gratifying that this voluntary body has been able to colonise several County patients, it must not be overlooked that only a small fraction of deserving cases has been dealt with.

APPENDIX I.

Death-Rates in 1925 from Tuberculosis in 121 Urban and Rural Districts in Lancashire, and in the 7 County Dispensary Areas.

Sanitary Districts.	Estimated Population, 1925.	Pulmonary Tuberculosis.			Non-Pulmonary Tuberculosis.	
		Number of Deaths, 1925.	Death-Rate per 1,000 of Population, 1925.	*Average* Death-Rate 10 years, 1915-24.	Number of Deaths, 1925.	Death-Rate per 1,000 of Population, 1925.
URBAN.						
Abram	6,860	2	0·29	0·81	...	...
Accrington (B)	43,600	28	0·64	0·81	11	0·25
Adlington	4,535	3	0·66	0·67	...	...
Ashton-in-Makerfield	24,120	14	0·58	0·74	9	0·37
Ashton-under-Lyne (B)	43,910	43	0·97	1·14	14	0·32
Aspull	8,124	8	0·98	0·67	3	0.37
Atherton	20,360	8	0·39	0·79	5	0·24
Audenshaw	8,249	12	1·45	0·62	...	...
Bacup (B)	21,240	16	0·75	0·74	3	0·14
Barrowford	5,557	6	1·07	0·64	1	0·18
Billinge	5,285	5	0·94	0·87	1	0·19
Blackrod	3,984	...	...	0·61	3	0·75
Brierfield	8,292	3	0·36	0·98	...	...
Carnforth	3,269	1	0·30	0·54	1	0·30
Chadderton	28,810	22	0·76	0·88	2	0·07
Chorley (B)	31,670	21	0·66	0·79	8	0·25
Church	6,844	3	0·43	0·79	1	0·15
Clayton-le-Moors	8,693	5	0·57	0·66	...	...
Clitheroe (B)	12,220	11	0·90	0·89	2	0·16
Colne (B)	25,250	19	0·75	0·95	3	0·12
Crompton	15,160	16	1·05	0·96	2	0·13
Croston	1,969	...	...	0·26	...	...
Dalton-in-Furness	12,060	7	0·58	1·34	5	0·41
Darwen (B)	38,850	25	0·64	0·67	7	0·18
Denton	17,770	8	0·45	0·83	1	0·06
Droylsden	14,010	9	0·64	1·15	4	0·28
Eccles (B)	45,960	37	0·80	1·07	2	0·04
Failsworth	17,190	16	0·93	1·09	3	0·17
Farnworth	29,030	23	0·79	1·02	7	0·24
Fleetwood	20,610	17	0·82	0·93	6	0·29
Formby	6,771	4	0·59	0·93	2	0·29
Fulwood	6,114	2	0·32	0·64	...	...
Golborne	7,610	4	0·52	0·89	3	0·39
Grange-over-Sands	2,020	2	0·99	0·78	1	0·49
Great Crosby	13,980	13	0·92	0·74	2	0·14
Great Harwood	13,790	5	0·36	0·64	5	0·36
Haslingden (B)	17,290	10	0·57	0·78	...	...
Haydock	11,170	7	0·62	0·88	4	0·36
Heysham	4,531	3	0·66	0·68	1	0·22
Heywood (B)	26,660	21	0·78	1·01	5	0·19
Hindley	24,930	14	0·56	0·78	3	0·12
Horwich	16,110	8	0·49	0·77	5	0·31
Hurst	8,220	8	0·97	1·02	2	0·24
Huyton-with-Roby	5,321	4	0·75	0·69	...	...
Ince-in-Makerfield	24,450	10	0·40	0·93	7	0·29
Irlam	11,920	8	0·67	0·59	3	0·25
Kearsley	10,380	4	0·38	0·77	...	...
Kirkham	3,840	1	0·26	1·12	1	0·26
Lancaster (B)	40,140	45	1·12	1·21	16	0·39
Lathom and Burscough	7,714	6	0·77	0·60	1	0·13
Lees	4,865	2	0·41	0·64	...	...
Leigh (B)	46,910	40	0·85	1·16	12	0·26
Leyland	9,527	8	0·83	0·72	1	0·10
Litherland	17,390	30	1·72	1·23	3	0·17
Littleborough	11,460	7	0·61	0·73	2	0·17
Little Crosby	1,264	...	...	0.76	...	...
Little Hulton	8,315	2	0·24	0·72	3	0·36
Little Lever	5,105	1	0·19	0·65	...	...
Longridge	4,216	...	...	0.89	2	0·47
Lytham St. Annes (B)	21,780	6	0·27	0·55	6	0·27
Middleton (B)	28,860	14	0·48	0·99	12	0·41
Milnrow	8,498	5	0·58	0·92	...	...
Morecambe (B)	14,120	12	0·84	0·79	...	...
Mossley (B)	12,470	9	0·72	0·86	2	0·16
Nelson (B)	39,990	23	0·57	0·66	8	0·20
Newton-in-Makerfield	19,910	20	1·00	0·87	2	0·10
Norden	4,160	2	0·48	0·69	...	...
Ormskirk	7,624	12	1·57	1·14	...	...
Orrell	7,147	3	0·41	0·70	1	0·14
Oswaldtwistle	15,180	3	0·19	0·67	3	0·19
Padiham	12,440	15	1·20	0·96	1	0·08
Poulton-le-Fylde	2,819	...	...	0·62	...	...

Sanitary Districts.	Estimated Population, 1925.	Pulmonary Tuberculosis.			Non-Pulmonary Tuberculosis.	
		Number of Deaths, 1925.	Death-Rate per 1,000 of Population, 1925.	*Average* Death-Rate 10 years. 1915-24.	Number of Deaths, 1925.	Death-Rate per 1,000 of Population, 1925.
Preesall	1,820	2	1·09	0·66	...	...
Prescot	9,918	5	0·50	1·00	2	0·20
Prestwich	19,610	13	0·66	0·91	3	0·15
Radcliffe	25,270	16	0·63	0·82	4	0·16
Rainford	3,754	1	0·26	0·29	...	...
Ramsbottom	15,210	7	0·46	0·81	2	0·13
Rawtenstall (B)	28,960	21	0·72	0·76	5	0.17
Rishton	7,059	5	0·70	0·60	...	...
Royton	17,440	10	0·57	0·88	5	0·29
Skelmersdale	7,072	1	0·14	0·75	1	0·14
Standish-with-Langtree	7,760	1	0·12	0·70	6	0·77
Stretford	48,460	36	0·74	0·92	13	0·27
Swinton and Pendlebury	33,400	15	0·44	0·96	7	0·21
Thornton	6,222	2	0·32	0·83	...	...
Tottington	6,775	2	0·29	1·01	1	0·15
Trawden	2,741	2	0·72	0·66	...	...
Turton	12,260	10	0·81	0·66	3	0·24
Tyldesley-with-Shakerley	16,040	11	0·68	0·85	2	0·12
Ulverston	9,800	8	0·81	0·69	3	0·31
Upholland	5,598	2	0·35	0·88	1	0·18
Urmston	8,379	5	0·59	0·79	1	0·12
Walton-le-Dale	12,260	13	1·06	0·82	1	0·08
Wardle	4,546	1	0·21	1·27	1	0·21
Waterloo-with-Seaforth	30,320	32	1·05	1·01	10	0·33
Westhoughton	16,820	5	0·29	0·54	6	0·36
Whitefield	7,202	1	0·13	0·74	...	...
Whitworth	8,711	9	1·03	1·19	1	0·11
Widnes (B)	42,100	41	0·97	1·16	11	0·26
Withnell	3,511	2	0·56	0·78	...	...
Worsley	14,490	6	0·41	0·56	8	0·55
Total Urban	1,534,000	1,066	0·69	0·88	320	0·21
RURAL.						
Barton-upon-Irwell	10,340	7	0·67	0·99	1	0·09
Blackburn	10,330	6	0·58	0·64	...	...
Burnley	19,480	10	0·51	0·66	1	0·05
Bury	9,733	5	0·51	0·79	2	0·20
Chorley	22,570	9	0·39	0·62	7	0·31
Clitheroe	9,160	5	0·54	0·60	2	0·22
Fylde	13,470	5	0·37	0·52	2	0·15
Garstang	11,090	7	0·63	0·49	4	0·36
Lancaster	9,268	4	0·43	0·61	2	0·21
Leigh	11,590	4	0·34	0·52	2	0·17
Limehurst	9,242	7	0·75	0·92	1	0·11
Lunesdale	6,448	6	0·93	0·45	2	0·31
Preston	24,400	11	0·45	0·68	1	0·04
Sefton...	4,528	5	1·10	1·05	1	0·22
Ulverston	17,350	5	0·28	0·69	2	0·11
Warrington	13,100	10	0·76	0·82	1	0·08
West Lanchasire	22,140	17	0·76	0·64	4	0·18
Whiston	20,900	13	0·62	0·93	6	0·29
Wigan	6,361	3	0·47	0·68	...	...
Total Rural	251,500	139	0·55	0·69	41	0·16
Total for Administrative County	1,785,500	1,205	0·67	0·85	361	0·20
Dispensary Areas.						
No. 1	246,641	161	0·64	...	60	0·24
No. 2	359,226	231	0·64	...	56	0·15
No. 3	374,031	265	0·71	...	69	0·18
No. 4	458,134	274	0·59	...	103	0·22
No. 5	252,586	225	0·89	...	53	0·21
Furness Sub-Area	41,230	22	0·53	...	11	0·27
Fylde Sub-Area	53,652	27	0·55	...	9	0·18

APPENDIX II.

NOTIFICATIONS OF TUBERCULOSIS.

Since February 1st, 1913, tuberculosis—both "pulmonary" and "other forms"—has been compulsorily notifiable under the Public Health (Tuberculosis) Regulations, 1912. The figures for the years 1913 to 1925 are given on page 2.

Tables B and C, here inserted, analyse the notifications received both as regards part of the body affected and in age groups.

Table D, also inserted, compares the male and female notifications.

Deaths of 393 *persons "notified as suffering from Pulmonary Tuberculosis" in* 1925 *which took place within three months of the date of notification.*

Period between date of case notification and death.	Certified cause of Death.			Total.
	Pulmonary.		Non-Pulmonary	
	Primary	Secondary		
Under 1 week	61	3	8	72
1 to 2 weeks	40	4	5	49
2 to 3 weeks	37	2	2	41
3 to 4 weeks	45	2	1	48
1 to 2 months	91	3	4	98
2 to 3 months	80	...	5	85
Total under 3 months ...	354	14	25	393
	368			

Included in the above Table are 49 deaths which occurred outside the County area.

In addition to the foregoing 393 deaths which occurred within three months of notification, in 33 instances (11 pulmonary and 22 non-pulmonary) death took place before the receipt of the notification, against 61 (33 pulmonary and 28 non-pulmonary) in the preceding year..

N.B.—The tables mentioned in Appendix II. have been prepared in the County public health department.

TABLES B, C AND D,

ANALYSING

NOTIFICATIONS UNDER PUBLIC HEALTH

(TUBERCULOSIS)

REGULATIONS, 1912.

TABLE B.

ADMINISTRATIVE COUNTY OF LANCASTER.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

CORRECTED* SUMMARY OF NOTIFICATIONS OF PULMONARY AND OTHER FORMS OF TUBERCULOSIS DURING THE FIFTY-TWO WEEKS ENDED 2ND JANUARY, 1926.

(Collated from the Weekly Returns of District Medical Officers of Health.)

NOTIFICATIONS ON FORMS A AND B—Excluding Duplicates.

	Pulmonary.					Non-Pulmonary. Alimentary.		Glands.					Genito-Urinary.						
	Lungs only.	Lungs and Larynx.	Laryngitis.	Mediastinal Glands.	Total.	Enteritis (Primary)	Peritonitis (Abdominal Tuberculosis)	Tabes (Mesenteric Glands).	Axillary.	Cervical.	Inguinal.	Not Classified. (2 or more Groups).	Bladder.	Fall. Tube.	Kidney.	Prostate.	Suprarenal.	Testicle and Epididymis.	Not Classified (2 or more).
Thirteen weeks ended 4th April, 1925 ...	516	11	1	5	533	4	36	5	9	101	...	2	1	1	3	...	...	4	...
Thirteen weeks ended 4th July, 1925 ...	492	4	8	3	507	11	56	3	18	109	1	2	2	...	2	...	...	...	1
Thirteen weeks ended 3rd October, 1925 ...	413	2	1	4	420	3	31	1	20	60	1	...	1	..	1	...	...	3	...
Thirteen weeks ended 2nd January, 1926 ...	377	4	2	3	386	4	24	7	7	67	...	...	...	1	4	...	...	2	...
Total	1798	21	12	15	*1846	22	147	16	54	337	2	4	4	2	10	...	...	9	1

	Joints and Bones.	Trunk.		Arm.						Leg.													Total Pulmonary and Non-Pulmonary.	Total Notifications (i.e. including cases previously notified by other Doctors).
	Head (including Middle Ear).	Ribs and Sternum.	Spine.	Shoulder.	Scapula.	Humerus.	Elbow.	Radius.	Ulna.	Hand and Wrist.	Hip and Pelvis.	Femur.	Knee.	Tibia.	Fibula.	Foot and Ankle.	Two or more different Joints.	Not Classified.	Meningitis (Brain).	Miliary (Generalised).	Skin (Lupus).	Miscellaneous.	Total.		
Thirteen weeks ended 4th April, 1925 ...	...	2	13	3	...	...	1	1	...	12	18	2	5	2	...	7	3	...	25	1	18	8	287	820	935
Thirteen weeks ended 4th July, 1925 ...	...	3	14	2	...	...	4	...	...	4	17	1	8	1	...	6	4	2	30	3	17	5	326	833	934
Thirteen weeks ended 3rd October, 1925 ...	1	6	13	...	...	...	1	...	...	3	9	...	9	...	...	3	7	...	18	3	11	4	209	629	698
Thirteen weeks ended 2nd January, 1926 ...	1	2	10	1	1	...	2	...	...	1	10	2	10	...	...	6	5	...	17	2	16	3	205	591	673
Total	2	13	50	6	1	...	8	1	...	20	54	5	32	3	...	22	19	2	90	9	62	20	*1027	*2873	3240

NOTIFICATIONS ON FORMS A AND B—Excluding Duplicates.

		Pulmonary. Years 0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwds.	Total.	Total M. & F.
Thirteen weeks ended 4th April, 1925 ...	M.	...	4	11	8	31	40	55	59	66	23	10	307	533
	F.	...	...	8	15	46	41	45	34	19	13	5	226	
Thirteen weeks ended 4th July, 1925 ...	M.	...	10	8	13	20	28	56	61	54	17	5	272	507
	F.	1	4	9	9	49	43	41	40	24	5	10	235	
Thirteen weeks ended 3rd October, 1925 ...	M.	...	8	8	9	11	24	57	41	30	20	7	215	420
	F.	...	...	5	10	28	41	48	36	22	10	5	205	
Thirteen weeks ended 2nd January, 1926 ...	M.	...	...	5	8	19	23	44	39	42	14	2	196	386
	F.	2	6	2	10	21	28	64	26	20	6	5	190	
Total	M.	...	22	32	38	81	115	212	200	192	74	24	990	*1846
	F.	3	10	24	44	144	153	198	136	85	34	25	856	

		Non-Pulmonary. Years 0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwds.	Total.	Total M. & F.	Total Pulmonary and Non-Pulmonary.
Thirteen weeks ended 4th April, 1925 ...	M.	5	35	23	21	19	12	13	6	4	3	2	143	287	820
	F.	2	16	26	34	28	11	12	9	3	2	1	144		
Thirteen weeks ended 4th July, 1925 ...	M.	4	32	42	18	20	9	16	6	1	4	2	154	326	833
	F.	4	27	25	33	27	17	18	5	7	6	3	172		
Thirteen weeks ended 3rd October, 1925 ...	M.	5	13	26	16	11	10	12	9	6	3	1	112	209	629
	F.	1	24	14	14	17	5	12	5	4	...	1	97		
Thirteen weeks ended 2nd January, 1926 ...	M.	3	28	15	18	8	6	12	5	4	2	...	101	205	591
	F.	2	19	19	10	10	8	15	14	4	2	1	104		
Total	M.	17	108	106	73	58	37	53	26	15	12	5	510	*1027	*2873
	F.	9	86	84	91	82	41	57	33	18	10	6	517		

		Notifications. Form B only. (By School Medical Inspectors). Primary Notifications (i.e., excluding duplicates). Under 5 years. P.	N.P.	5 to 10 years. P.	N.P.	10 to 15 years. P.	N.P.	Total. P.	N.P.		Total Notifications (i.e., including cases previously notified by other Doctors).	Number of Cases Notified on Form C. (Admissions). Poor Law Institutions.	Sanatoria.	Number of Cases notified on Form D (Discharges from Institutions).
Thirteen weeks ended 4th April, 1925 ...	M.	...	...	...	3	...	3	...	6	14	15	6	329	332
	F.	...	1	...	4	...	3	...	8					
Thirteen weeks ended 4th July, 1925 ...	M.	1	...	...	6	1	1	2	7	15	15	12	331	316
	F.	...	1	...	3	...	2	...	6					
Thirteen weeks ended 3rd October, 1925 ...	M.	...	...	2	2	...	2	2	4	9	9	5	268	271
	F.	...	1	...	1	1	...	1	2					
Thirteen weeks ended 2nd January, 1926 ...	M.	...	1	...	3	...	1	...	5	10	11	14	310	312
	F.	...	...	...	3	...	2	...	5					
Total	M.	1	1	2	14	1	7	4	22	48	50	37	1238	1231
	F.	...	3	...	11	1	7	1	21					

*Corrected figures after deducting 83 Pulmonary and 49 Non-Pulmonary cases notified in error.

TABLE C.

ADMINISTRATIVE COUNTY OF LANCASTER.

Public Health (Tuberculosis) Regulations, 1912.

ANALYSIS OF THE NOTIFICATIONS ON FORMS A AND B (EXCLUDING DUPLICATES) RECEIVED DURING THE FIFTY-TWO WEEKS ENDED 2nd JANUARY, 1926. († Corrected figures.)

(Collated from Weekly Returns of District Medical Officers of Health.)

Age—Years:—		0 — 1			1 — 5			5 — 10			10 — 15			15 — 20			20 — 25			25 — 35			35 — 45			45 — 55			55 — 65			65 & upwds.			TOTALS.			
Sex.	Col.	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	M.	F.	Both Sexes	Col.
PULMONARY—																																					
Lungs only	1	...	3	3	21	10	31	30	22	52	36	38	74	79	143	222	112	152	264	209	197	406	192	132	324	184	84	268	72	34	106	23	25	48	958	840	1798	1
Lungs and Larynx	2	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	2	...	2	2	...	2	5	1	6	4	1	5	2	...	2	1	...	1	17	4	21	2
Laryngitis	3	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	1	1	...	1	3	3	6	3	...	3	...	...	...	...	...	...	9	3	12	3
Mediastinal Glands	4	...	...	...	1	...	1	2	2	4	2	5	7	...	...	...	...	1	1	...	1	1	...	...	...	1	...	1	...	...	...	...	...	...	6	9	15	4
Pulmonary Total	5	...	3	3	22	10	32	32	24	56	38	44	82	81	144	225	115	153	268	212	198	410	200	136	336	192	85	277	74	34	108	24	25	49	990	856	1846	5
*Cases—Pulmonary and Non-Pulmonary combined		...	2	2	5	4	9	4	2	6	...	2	2	2	4	6	5	3	8	5	2	7	4	3	7	4	2	6	1	...	1	...	...	...	30	24	54	
NON-PULMONARY—																																					
Alimentary — Enteritis (Primary)	6	...	1	1	4	1	5	2	...	2	3	1	4	1	1	2	...	2	2	1	...	1	1	1	2	...	1	1	1	1	2	...	...	...	13	9	22	6
Alimentary — Peritonitis (Abdominal Tuberculosis)	7	3	...	3	24	15	39	11	13	24	11	6	17	10	19	29	6	5	11	6	8	14	5	2	7	1	...	1	...	...	...	...	2	2	77	70	147	7
Glands — Tabes (Mesenteric Glands)	8	...	...	...	3	2	5	3	1	4	1	...	1	...	1	1	...	2	2	...	2	2	...	...	...	...	1	1	...	...	...	...	...	...	7	9	16	8
Glands — Axillary	9	...	...	...	1	3	4	7	5	12	7	8	15	2	2	4	6	3	9	1	4	5	3	1	4	...	...	...	...	...	...	1	...	1	28	26	54	9
Glands — Cervical	10	3	3	6	25	28	53	43	41	84	21	38	59	19	36	55	7	14	21	16	18	34	2	8	10	1	10	11	...	3	3	1	...	1	138	199	337	10
Glands — Inguinal	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	1	...	...	...	...	...	...	...	...	...	2	...	2	11
Glands — Not Classified (Two or more groups)	12	...	...	...	...	...	...	...	1	1	...	1	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	2	4	12
Genito-Urinary — Bladder	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	1	1	...	1	1	...	1	...	...	...	...	...	...	3	1	4	13
Genito-Urinary — Fallopian Tube	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	2	3	5	1	...	1	...	...	...	...	...	...	...	2	2	14
Genito-Urinary — Kidney	15	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1	1	1	1	2	2	3	5	1	...	1	...	...	...	...	...	...	5	5	10	15
Genito-Urinary — Prostate	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	16
Genito-Urinary — Suprarenal	17	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	17
Genito-Urinary — Testicle and Epididymis	18	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	...	2	2	...	2	2	...	2	1	...	1	1	...	1	...	...	...	9	...	9	18
Genito-Urinary — Not Classified (Two or more)	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	19
Joints and Bones — Head (Incl. Middle Ear)	20	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	1	2	20
Joints and Bones — Trunk— Ribs and Sternum	21	...	...	...	...	1	1	...	...	...	...	...	...	1	...	1	2	...	2	1	...	1	1	1	2	2	1	3	2	...	2	...	1	1	9	4	13	21
Joints and Bones — Spine	22	...	...	...	5	6	11	3	...	3	4	2	6	5	4	9	3	2	5	4	3	7	1	3	4	1	2	3	1	1	2	...	...	...	27	23	50	22
Joints and Bones — Arm— Shoulder	23	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	1	2	3	1	1	2	...	...	...	...	...	...	...	...	...	3	3	6	23
Joints and Bones — Scapula	24	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	24
Joints and Bones — Humerus	25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
Joints and Bones — Elbow	26	...	...	...	...	...	...	...	2	2	...	3	3	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	1	...	1	1	2	6	8	26
Joints and Bones — Radius	27	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	27
Joints and Bones — Ulna	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28
Joints and Bones — Hand and Wrist	29	2	...	2	2	3	5	1	...	1	...	1	1	...	4	4	1	1	2	3	1	4	...	...	...	...	...	...	...	...	...	...	1	1	9	11	20	29
Joints and Bones — Leg— Hip and Pelvis	30	...	...	...	6	4	10	5	3	8	5	7	12	4	4	8	2	3	5	6	2	8	...	2	2	1	...	1	...	...	...	...	...	...	29	25	54	30
Joints and Bones — Femur	31	...	...	...	...	...	...	...	...	...	...	1	1	1	2	3	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	2	3	5	31
Joints and Bones — Knee	32	...	...	...	7	...	7	5	1	6	1	1	2	3	...	3	2	2	4	...	4	4	...	1	1	2	...	2	3	...	3	...	...	...	23	9	32	32
Joints and Bones — Tibia	33	...	...	...	...	...	...	...	...	...	...	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	33
Joints and Bones — Fibula	34	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	34
Joints and Bones — Foot and Ankle	35	1	...	1	4	3	7	...	...	...	2	1	3	...	...	...	1	1	2	1	2	3	1	2	3	1	...	1	...	2	2	...	...	...	11	11	22	35
Joints and Bones — Two or more different Joints	36	1	...	1	2	...	2	5	...	5	2	...	2	2	1	3	...	1	1	1	...	1	3	1	4	...	...	...	...	...	...	...	...	...	16	3	19	36
Joints and Bones — Not Classified	37	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	1	2	37
Meningitis (Brain)	38	7	4	11	21	14	35	10	10	20	3	10	13	4	1	5	1	...	1	2	1	3	1	1	2	...	...	...	...	...	...	...	...	...	49	41	90	38
Miliary (Generalised)	39	...	1	1	...	1	1	1	...	1	1	1	2	1	...	1	1	...	1	...	1	1	...	...	...	1	...	1	...	...	...	...	...	...	5	4	9	39
Lupus	40	...	...	...	...	2	2	8	5	13	9	6	15	3	6	9	2	2	4	3	5	8	...	3	3	1	2	3	2	2	4	...	1	1	28	34	62	40
Miscellaneous	41	...	...	...	4	2	6	2	...	2	1	...	1	...	1	1	...	...	...	1	1	2	1	3	4	...	1	1	...	1	1	2	...	2	11	9	20	41
Non-Pulmonary Total	42	17	9	26	108	86	194	106	84	190	73	91	164	58	82	140	37	41	78	53	57	110	26	33	59	15	18	33	12	10	22	5	6	11	510	517	1027	42
GRAND TOTAL	43	17	12	29	130	96	226	138	108	246	111	135	246	139	226	365	152	194	346	265	255	520	226	169	395	207	103	310	86	44	130	29	31	60	1500	1373	†2873	43

* Combined cases are included in Pulmonary Total, but are shown separately for purposes of reference.

† Corrected figures after deducting 83 Pulmonary and 49 Non-Pulmonary cases notified in error.

TABLE D.

ADMINISTRATIVE COUNTY OF LANCASTER.

PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1912.

THE FOLLOWING TABLE COMPARES THE MALE AND FEMALE NOTIFIED CASES IN THE ADMINISTRATIVE COUNTY DURING THE YEARS 1913 to 1925, AT CERTAIN AGE GROUPS:—

		PULMONARY TUBERCULOSIS.													NON-PULMONARY TUBERCULOSIS.										
	Cases Male or Female.	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwds.	Total.	Total. M. & F.	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwds.	Total.	Total. M. & F.
1913	M	1	24	97	70	129	131	311	292	228	114	29	1426		29	128	177	137	98	58	71	48	27	18	3	794	
(11 months)	F	*6*	*28*	*100*	*104*	*158*	*188*	*296*	*201*	*103*	*65*	*25*	*1274*	2700	*28*	*118*	*134*	*132*	*118*	*86*	*80*	*47*	*29*	*19*	*7*	*798*	1592
1914	M	6	40	80	83	112	172	329	315	240	107	23	1507		43	111	131	95	77	36	47	23	20	14	3	600	
	F	*3*	*32*	*115*	*107*	*140*	*181*	*336*	*225*	*107*	*47*	*20*	*1313*	2820	*37*	*88*	*98*	*89*	*77*	*44*	*58*	*27*	*12*	*6*	*4*	*540*	1140
1915	M	5	47	97	79	127	138	305	303	235	117	34	1487		39	109	113	93	61	46	50	29	14	5	3	562	
	F	*5*	*27*	*96*	*111*	*152*	*191*	*383*	*239*	*100*	*60*	*21*	*1385*	2872	*26*	*88*	*107*	*88*	*84*	*53*	*61*	*33*	*15*	*7*	*4*	*566*	1128
1916	M	1	31	71	77	121	157	331	296	190	96	36	1407		20	127	135	99	65	42	47	34	12	13	5	599	
	F	*2*	*24*	*81*	*96*	*165*	*186*	*345*	*220*	*98*	*52*	*13*	*1282*	2689	*8*	*68*	*122*	*114*	*85*	*46*	*65*	*41*	*19*	*11*	*2*	*581*	1180
1917	M	4	20	77	62	113	104	262	268	190	90	30	1220		21	116	109	105	61	23	42	30	8	9	1	525	
	F	*2*	*22*	*90*	*100*	*129*	*155*	*296*	*185*	*107*	*50*	*19*	*1155*	2375	*7*	*79*	*97*	*98*	*89*	*59*	*49*	*25*	*23*	*6*	*5*	*537*	1062
1918	M	3	35	55	59	140	108	300	317	232	98	28	1375		14	75	103	65	60	19	29	16	14	7	2	404	
	F	*1*	*24*	*69*	*74*	*139*	*166*	*297*	*207*	*117*	*52*	*13*	*1159*	2534	*10*	*75*	*84*	*92*	*80*	*46*	*46*	*29*	*9*	*6*	*4*	*481*	885
1919	M	2	22	53	55	94	107	238	212	165	91	17	1056		13	50	97	80	53	26	31	22	19	12	4	407	
	F	*5*	*14*	*54*	*80*	*126*	*161*	*261*	*184*	*99*	*41*	*24*	*1049*	2105	*10*	*59*	*98*	*76*	*61*	*43*	*41*	*29*	*11*	*7*	*5*	*440*	847
1920	M	2	24	56	63	94	120	281	249	160	90	14	1153		31	62	107	108	68	26	35	23	16	11	5	492	
	F	*2*	*20*	*53*	*71*	*115*	*122*	*264*	*147*	*84*	*36*	*17*	*931*	2084	*12*	*66*	*86*	*78*	*62*	*46*	*52*	*34*	*23*	*16*	*1*	*476*	968
1921	M	1	17	43	47	94	133	222	225	162	84	19	1047		12	60	110	84	53	32	41	23	17	6	4	442	
	F	...	*12*	*53*	*77*	*132*	*160*	*255*	*156*	*82*	*50*	*20*	*997*	2044	*15*	*62*	*89*	*81*	*65*	*41*	*53*	*15*	*21*	*9*	*6*	*457*	899
1922	M	3	16	38	47	83	120	227	190	148	99	27	998		18	101	111	79	55	37	39	22	13	7	3	485	
	F	*4*	*15*	*45*	*57*	*135*	*135*	*202*	*146*	*61*	*42*	*23*	*865*	*1863	*13*	*77*	*80*	*95*	*61*	*45*	*50*	*24*	*14*	*7*	*5*	*471*	*956
1923	M	2	10	41	43	82	132	236	207	147	94	13	1007		18	115	134	105	75	35	45	22	14	15	6	584	
	F	*1*	*14*	*43*	*60*	*115*	*149*	*251*	*149*	*83*	*49*	*16*	*930*	†1937	*14*	*103*	*110*	*107*	*68*	*60*	*64*	*31*	*28*	*14*	*5*	*604*	†1188
1924	M	...	27	37	52	105	110	203	199	197	97	18	1045		19	123	92	92	95	35	43	25	17	12	3	556	
	F	*3*	*12*	*29*	*55*	*144*	*139*	*223*	*169*	*94*	*49*	*10*	*927*	‡1972	*6*	*99*	*87*	*94*	*80*	*55*	*72*	*30*	*17*	*11*	*13*	*564*	‡1120
1925	M	...	22	32	38	81	115	212	200	192	74	24	990		17	108	106	73	58	37	53	26	15	12	5	510	
	F	*3*	*10*	*24*	*44*	*144*	*153*	*198*	*136*	*85*	*34*	*25*	*856*	§1846	*9*	*86*	*84*	*91*	*82*	*41*	*57*	*33*	*18*	*10*	*6*	*517*	§1027

* Corrected figures for 1922 after deducting 14 Pulmonary and 12 Non-Pulmonary cases notified in error.

† ,, 1923 ,, 33 ,, 31 ,, ,,

‡ ,, 1924 ,, 57 ,, 38 ,, ,,

§ ,, 1925 ,, 83 ,, 49 ,, ,,

APPENDIX III.

PULMONARY HOSPITALS.

Below are given brief particulars of the arrangements existing for the use of accommodation at the 17 pulmonary hospitals for County patients (referred to on pages 75–76) :—

(1) Bull Hill Pulmonary Hospital, Darwen.

Commencing in 1913, an arrangement was made with the Darwen Corporation for the treatment of patients in a pavilion (originally erected for enteric cases but afterwards equipped for tuberculous cases) at the Bull Hill Isolation Hospital. Accommodation was provided for 18 patients, which number was increased to 20 early in 1924. Only females are now treated. The Ministry of Health have decided that the pavilion must revert to its original purpose, namely, the treatment of one or other of the principal epidemic diseases, and in consequence the County Council are providing alternative and additional hospital accommodation for tuberculous cases at Withnell Hall, which they have purchased (see page 70).

No. of cases discharged during 1925 was 38, whilst 18 died.

(2) Burnley District Pulmonary Hospital.

In September, 1919, an arrangement was made with the Burnley Joint Hospital Board to allow the County Council the use of occasional beds at the above hospital for the treatment of patients suffering from pulmonary tuberculosis. From 1922, it was found practicable to reserve 10 beds for County patients exclusively, until July, 1926, when the number was reduced to five (all females).

No. of cases discharged during 1925 was 11, whilst 6 died.

(3) Chadderton Pulmonary Hospital, Racefield, Royton.

An agreement was made on the 1st October, 1919, with the Chadderton, Royton, and Crompton Joint Hospital Board for the use of the new buildings, erected as a small-pox hospital, for the treatment of patients suffering from pulmonary tuberculosis.

This institution is dealt with further on page 65.

The hospital accommodates 40 patients (females), and the number of cases discharged during 1925 was 68, whilst 28 died.

(4) East Lancashire Tuberculosis Colony—Pulmonary Hospital Section.

With the extension of the East Lancashire Tuberculosis Colony, Barrowmore Hall, Great Barrow, near Chester, which belongs to the Joint Council of the Order of St. John of Jerusalem and the British Red Cross Society, the Committee of Management were able to place at the disposal of the County Council some 10 beds for advanced cases of pulmonary tuberculosis. The first advanced patient was sent to the institution on the 23rd June, 1925. As the colony is situated some distance from Lancashire, ambulant cases likely to make satisfactory progress are, as far as possible, selected for these beds.

No. of cases discharged during 1925 was 10, whilst 1 died.

(5) Eccleston Hall Pulmonary Hospital, Near St. Helens.

In May, 1918, arrangements were made with the St. Helens Corporation to allow the County Council the use of occasional beds at the Eccleston Hall Pulmonary Hospital, when such accommodation is not required for Borough patients.

No. of cases discharged during 1925 was 10, whilst 5 died.

(6) Heath Charnock Pulmonary Hospital, near Chorley.

By agreement with the Chorley Joint Hospital Board, the County Council erected, equipped, and furnished two pavilions, one for male and the other for female patients, containing 16 and 14 beds respectively together with a dining hall and some additional staff accommodation.

This institution is dealt with further on page 66.

No. of cases discharged during 1925 was 46, whilst 26 died.

(7) Hefferston Grange Pulmonary Hospital, Weaverham, Cheshire.

By arrangement with the Warrington Corporation, in February, 1922, about 10 beds are reserved at this institution for the treatment of advanced cases from the County area, the first County case being admitted on the 14th June, 1922.

No. of cases discharged during 1925 was 13, whilst 3 died.

(8) Linacre Pulmonary Hospital, near Liverpool.

In October, 1915, an arrangement was made with the Bootle Corporation to allow the County Council the use of occasional beds at the Linacre Pulmonary Hospital when such accommodation is not required for patients from the Borough.

No. of cases discharged during 1925 was 5, whilst 2 died.

(9) Luneside Pulmonary Hospital, Lancaster.

By an agreement with the Lancaster Corporation, which took effect from the 1st January, 1915, the County Council are allowed the use of 21 beds at the isolation hospital, which had been adapted for the reception and treatment of persons suffering from tuberculosis.

The consultant tuberculosis officer for dispensary area No. 1 (Dr. A. D. Brunwin) acts as visiting physician of this hospital.

No. of cases discharged during 1925 was 40, whilst 18 died.

(10) Marland Pulmonary Hospital, Rochdale.

In November, 1918, an arrangement was made with the Rochdale Corporation to allow the County Council the use of five or six beds at the Marland Pulmonary Hospital.

No. of cases (all females) discharged during 1925 was 8, whilst 5 died.

(11) The Liverpool Hospital for Consumption, Mount Pleasant, Liverpool.

The Committee of Management allow the County Council the use of occasional beds at this hospital.

No. of cases discharged during 1925 was 1, whilst 2 died.

(12) Peel Hall Pulmonary Hospital, Little Hulton.

This hospital, belonging to the County Council, provides accommodation for 52 advanced male patients.

The institution is dealt with further on page 67.

No. of cases discharged during 1925 was 90, whilst 34 died.

(13) Pemberton Pulmonary Hospital, Wigan.

By an agreement with the Wigan Corporation, which took effect from the 20th December, 1915, for a period of ten years, the County Council are allowed the use of four beds at the Pemberton Pulmonary Hospital.

No. of cases discharged during 1925 was 4, whilst 2 died.

(14) Rufford Pulmonary Hospital, near Ormskirk.

The County Council have adapted the hall and estate purchased by them at Rufford for the purpose of a pulmonary hospital accommodating about 50 patients (females), the first patient being admitted in April, 1926. This institution is dealt with further on page 69.

(15) Westhulme Pulmonary Hospital, Oldham.

Since May, 1914, by arrangement with the Oldham Corporation, up to 5 beds have been reserved for County Patients at the Westhulme Pulmonary Hospital.

No. of cases discharged during 1925 was 15, whilst 4 died.

(16) Withnell Pulmonary Hospital.

As stated more fully on page 70, the County Council have purchased and are adapting Withnell Hall and estate for the purpose of a pulmonary hospital to accommodate some 46 patients in replacement of, and in addition to, the 20 beds at the Bull Hill Pulmonary Hospital, Darwen, which institution will cease to be occupied by tuberculous patients on the order of the Ministry of Health, so that it may be available for cases of ordinary infectious disease.

(17) Wolstenholme Hall Pulmonary Hospital, Norden.

In August, 1920, the Rochdale Corporation equipped Wolstenholme Hall, Norden, as a pulmonary hospital (for male patients only) and they agreed to reserve 10 beds for County patients, this number being later increased to 25 with occasional additional beds.

No. of cases discharged during 1925 was 35, whilst 20 died.

APPENDIX IV.

INSTITUTIONAL ACCOMMODATION.

The following tables show the number of beds occupied by County patients undergoing residential treatment for pulmonary and non-pulmonary tuberculosis as on the 31st December of 1921, 1922, 1923, 1924 and 1925 :—

Pulmonary Tuberculosis.	Number of Beds occupied— End of 1921.	End of 1922.	End of 1923.	End of 1924.	End of 1925.
Sanatoria—					
Aitken, near Bury...	47	45	48	42	48
Bournemouth (Home)	...	1	...	...	...
Bournemouth (Royal National)	...	1	1	1	...
Crossley, Kingswood	3	...	1	...	1
East Lancashire, Cheshire	...	...	...	13	26
Elswick, near Kirkham	55	56	58	59	40
Fazakerley, Liverpool	...	1	1	...	1
Halifax (Shelf)	18	10	12	8	13
High Carley, Ulverston	75	90	96	101	104
Holy Cross, Surrey	1	1	...	...	...
King Edward VII, Midhurst, Sussex	...	2	1	1	1
King George's, Hants (for sailors)	...	1	2	2	1
Liverpool, Kingswood	...	2	3	...	...
Meathop, Grange-over-Sands	47	37	42	45	39
Nordrach-on-Dee	1	1	2	...	...
Pendyffryn Hall, North Wales	...	...	...	1	1
Strinesdale, Oldham	...	...	1	...	...
Ventnor, Isle of Wight	...	1	1	1	1
Wensleydale, Aysgarth	1	1	...	...	...
Wilkinson, Bolton	20	16	14	12	20
Bowdon, Cheshire (for children only) ...	4	2	1	2	1
Eastby, near Skipton ,, ,, ,, ...	36	35	37	25	31
Freshfield, near Liverpool ,, ,, ,, ...	1	...	1	1	...
Oubas House, Ulverston ,, ,, ,, ...	18	21	21	21	18
	327	324	343	335	346
Pulmonary Hospitals—					
Bull Hill, Darwen	18	16	18	18	18
Burnley	10	13	11	10	9
Chadderton, near Oldham	29	27	34	38	36
East Lancashire, Cheshire	...	...	...	...	8
Eccleston Hall, St. Helens	4	10	15	8	4
Heath Charnock, Chorley	29	25	29	31	29
Hefferston Grange, Cheshire	...	15	9	4	10
Luneside, Lancaster	15	14	18	16	17
Linacre, Bootle	3	1	...	1	1
Marland, Rochdale	14	8	11	5	5
Mount Pleasant, Liverpool	...	3	3	...	1
Peel Hall, Little Hulton	44	44	45	45	46
Pemberton, Wigan	4	4	4	3	4
Westhulme, Oldham	7	6	3	5	2
Wolstenholme Hall, Norden	22	25	30	20	28
	199	211	230	204	218
Sanatoria and Training Colonies—					
East Lancashire, Cheshire	4	13	11	12	5
Delamere, Cheshire	5	4	1	...	...
Maltings Farm, Colchester	...	...	...	1	...
	9	17	12	13	5

Non-Pulmonary Tuberculosis.	Number of Beds occupied— End of 1921.	End of 1922.	End of 1923.	End of 1924.	End of 1925.
Non-Pulmonary Hospitals—					
Ancoats Hospital, Manchester	4	6	2	1	1
Ashton-under-Lyne Infirmary	7	3	8	4	6
Blackburn Royal Infirmary	3	1	1	1	1
Bolton Infirmary	4	7	3	...	...
Bootle Borough Hospital	3	1	...	3	...
Burnley Victoria Hospital	...	1	...	...	...
Bury Infirmary	6	1	2	3	2
Elswick Sanatorium, near Kirkham	...	...	...	...	25
Liverpool David Lewis Northern Hospital	...	...	...	...	1
Liverpool Royal Infirmary	...	2	1	...	...
Liverpool Stanley Hospital	...	1	...	...	...
Manchester Royal Infirmary	9	9	6	9	5
Manchester & Salford Skin Hospital	4	4	3	2	6
Margate Royal Sea Bathing Hospital	...	...	1	...	...
North Lonsdale Hospital, Barrow	1	...	1	2	2
Pilkington, St. Helens	...	...	...	52	...
Preston Royal Infirmary	8	6	4	5	4
Salford Royal Hospital	1	...	...	...	2
Shropshire Orthopædic Hospital, Oswestry	...	2	25	29	37
Southport Infirmary	1	...	...	...	...
Warrington Infirmary	5	3	...	4	3
Wigan Infirmary	4	4	1	...	1
For Children Only.					
Alton, Hants. (Lord Mayor Treloar Cripples' Hospital)	...	11	17	14	21
Eastby, near Skipton	7	...	3	6	9
Heatherwood, Berks. (United Services Fund)	...	15	20	24	27
Heswall (Royal Liverpool Children's Hospital)	3	4	11	3	7
King Edward VII Hospital for Crippled Children, Sheffield	...	...	...	...	10
Leasowe (Liverpool Open-Air Hospital for Children)	20	26	26	31	31
Myrtle Street, Liverpool (Royal Liverpool Children's Hospital)	...	2	...	...	1
Oubas House, Ulverston	...	...	...	...	1
Pendlebury (Royal Manchester Children's Hospital)	...	4	6	2	4
Stannington, Northumberland (Children's Holiday Association)	...	...	10	6	...
Thingwall, Cheshire (Royal Liverpool Children's Hospital)	...	...	...	...	1
West Kirby (Children's Convalescent Home)	8	5	6	8	7
	98	118	157	209	215
Observation Hospitals—					
Bury	8	8	8	5	6
Grand Total	641	678	750	766	790

N.B.—Included in the above accommodation of 790 beds at the end of 1925, there were the following beds occupied by "observation" cases :—Sanatoria, High Carley 14, Eastby 1, Elswick 1, Wilkinson 1, Oubas House 1 ; Bull Hill Pulmonary Hospital 1 ; Bury Observation Hospital, doubtful pulmonary 5, doubtful non-pulmonary 1 ; total 25.

APPENDIX V.

CHANGES IN THE CLASSIFICATION OF CASES OF TUBERCULOSIS.

The following statement shows the new classification of cases in accordance with Memorandum 37/T. issued by the Ministry of Health in September, 1925 :—

(a) *Patients suffering from pulmonary tuberculosis* to be divided into :—

Class T.B. Minus, viz., cases in which tubercle bacilli have never been demonstrated in the sputum ; and

Class T.B. Plus, viz., cases in which tubercle bacilli have at any time been found.*

It should be noted that a patient originally in *Class T.B. Minus* must be transferred to *Class T.B. Plus* at any stage in the course of treatment if and when tubercle bacilli are found ; while on the other hand a patient who is once placed in *Class T.B. Plus* can never revert to *Class T.B. Minus*. *Class T.B. Plus* should be further subdivided into three groups as follows :—

Group 1. Cases with slight constitutional disturbance, if any ; e.g., there should not be marked acceleration of pulse nor elevation of temperature except of very transient duration ; gastro-intestinal disturbance or emaciation, if present, should not be excessive.

The obvious physical signs should be of very limited extent as follows :—either present in one lobe only and in the case of an apical lesion of one upper lobe not extending below the second rib in front or not exceeding an equivalent area in any one lobe ; or where these physical signs are present in more than one lobe, they should be limited to the apices of the upper lobes and should not extend below the clavicle and the spine of the scapula.

No complication (tuberculous or other) of prognostic gravity should be present. A small area of dry pleurisy should not exclude a case from this group.

Group 3. Cases with profound systemiatic disturbance or constitutional deterioration ; with marked impairment of function, either local or general, and with little or no prospect of recovery.

All cases with grave complications, whether tuberculous or not, should be classified in this group, e.g., diabetes, tuberculosis of larynx or intestine, &c.

Group 2. All cases which cannot be placed in Groups 1 and 3.

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* Statements by patients that tubercle bacilli have been found should not be relied on unless supported by documentary or other evidence.

(b) *Patients suffering from non-pulmonary tuberculosis* to be classified according to the site of the lesion as follows :—

(1) Tuberculosis of bones and joints.

(2) Abdominal tuberculosis (i.e., tuberculosis of peritoneum, intestines or mesenteric glands).

(3) Tuberculosis of other organs.

(4) Tuberculosis of peripheral glands.

Patients suffering from multiple lesions should be classified in one sub-group only, viz., in that applicable to the case which stands highest in the above table.

All patients will be grouped according to their sex and age ; patients under 15 years of age will be classed as children, and those of 15 years and upwards as adults.

The Ministry give three Tables which they require to be furnished to them annually by County and County Borough Councils, and the following statement shows briefly the information they contain :—

Table I.—A complicated annual return showing the work of the dispensaries in regard to (a) examination and diagnosis of new cases and contacts, according to sex, age, and disease, (b) special treatment (e.g., light and orthopædic attention) afforded to patients, (c) changes in the register of tuberculous persons, (d) bacteriological examinations, x-ray work, and (e) numerous other phases of tuberculosis officers' and health visitors' work. In this table the Ministry require to be informed of the number of persons not diagnosed by the tuberculosis officer, first within one month, and again within three months of the date of the first examination.

Table II.—Shows (a) the average number of beds available for patients during the year, divided into several types of institution (e.g., sanatorium, pulmonary hospital, general and special hospital), distinguishing the accommodation available for adult males, adult females, and children ; and (b) the number of patients admitted to, discharged from, and dying in institutions during the year, divided according to age and sex.

Table III.—A return showing the immediate results of treatment of patients and observation of " doubtful " cases discharged from residential institutions during the year, divided according to age, sex, classification of disease and period of treatment.